Consumer Federation of America

Consumer @ction

TRANSFORMING THE INFORMATION SUPERHIGHWAY INTO A PRIVATE TOLL ROAD:

THE CASE AGAINST CLOSED ACCESS BROADBAND INTERNET SYSTEMS

SEPTEMBER 1999

Consumer Action is a non-profit, membership-based organization that was founded in San Francisco in 1971. Throughout its 28 years, Consumer Action has continued to serve consumers nationwide by advancing consumer rights; referring consumers to complaint-handling agencies through our free hotline; publishing educational materials in Chinese, English, Korean, Tagalog, Russian and Vietnamese and other languages; advocating for consumers in the media and before lawmakers; and comparing prices on credit cards, bank accounts and long distance services. Consumer Action is a member of CFA.

Consumer Federation of America, founded in 1968, is the nation's largest consumer advocacy group. Composed of over 250 state and local affiliates representing consumer, senior citizen, low-income, labor, farm, public power, and cooperative organizations, CFA's purpose is to represent consumer interests before the Congress and the federal agencies and to assist its state and local members in their activities in their local jurisdictions.

TABLE OF CONTENTS

LIST OF EXHIBITS

CONSUMER GROUPS RELEASE STUDY URGING OPEN ACCESS TO HIGH-SPEED "BROADBAND" INTERNET

PUBLIC POLICY ANALYSIS DEMONSTRATES ANTI-CONSUMER IMPACT OF PRIVATE REGULATION OF THE "BROADBAND" INTERNET

(Los Angeles, Calif., and Washington, D.C., September 20, 1999) — Consumer Action and the Consumer Federation of America (CFA) jointly released today a major public policy study demonstrating that open access to the high-speed "broadband" Internet is essential to preserve the Internet as a vibrant medium for communications and commerce.

"This analysis makes it clear that neither the cable companies nor the telephone companies should be allowed to pick and choose which Internet service providers (ISPs) may provide consumers access to high-speed Internet connections," said Ken McEldowney, Executive Director of Consumer Action, and President of CFA. "The effort to impose private regulation on the Internet in the form of exclusive, discriminatory access is a dagger pointed at the heart of the Internet, which has thrived by allowing all content providers to have equal access to the wires that connect people to the network."

The 100-page report, titled *Transforming the Information Highway into a Private Toll Road*, explains the harm to consumers inherent in efforts to close the on-ramps to the nation's information superhighway, including:

- preventing competition for cable TV programming;
- reducing competition for broadband Internet services;
- abusive pricing and bundling of cable TV and Internet services;
- diminished creativity, innovation, and diversity of content; and
- restriction of universal service.

"AT&T has set out to amass a monopoly over U.S. cable TV systems and to extend the cable TV business model to the Internet," said Dr. Mark Cooper, CFA's Director of Research, and principal author of the study. "That model includes price increases over three times the rate of inflation, denial of consumer choice through forced bundling of programming, and restriction of innovation through preferential treatment of affiliated programming."

"Local phone companies must also live up to their duty under the Telecommunications Act of 1996 to provide open access to their high-speed networks," McEldowney added. "They should not use the efforts of cable companies trying to close off their broadband 'pipe' to unaffiliated ISPs as an excuse to push policymakers to eliminate telephone company obligations to run an open network. The potential end result will be a disaster for consumers – two private toll roads and no open access lanes on the information superhighway."

The report notes that local cable TV franchising authorities in Portland, Oregon, and Broward County, Florida, have ordered AT&T to provide open, non-discriminatory access to the cable network as a condition of the transfer of cable TV licenses to AT&T, and that scores of others currently are taking up the issue. To promote the same pro-consumer outcome, Consumer Action will be filing the study before numerous cable franchise authorities in the Los Angeles area, as well as in San Francisco, which is developing its policy on open access.

"The local governments that have been insisting on open access have stepped up to defend consumer interests by filling a void left by federal regulators," McEldowney said. "Congress and federal regulators have been promising the American people for years that competition will break the monopoly power of cable TV and local telephone companies—and they have been wrong. Our report shows that the Federal Communications Commission has erred again, by not imposing an open access requirement, especially with one company dominating so much of the infrastructure and programming for both cable TV and broadband Internet service."

The report details the technological and economic mechanisms that already are being used to restrict competition in a closed, discriminatory cable network. The study:

- documents the technological capability to discriminate against unaffiliated ISPs;
- enumerates the current anti-competitive and anti-consumer practices of cable TV and local telephone companies;
- identifies key elements of the closed access business model planned for the broadband Internet;
- reviews the extremely negative experience of consumers in the 15 years that the cable TV industry has operated as a closed access network; and
- analyzes the failure of cross-technology competition to break the cable monopoly.

"To maintain a vibrant Internet, ISP access to consumers must be open and non-discriminatory, regardless of whether the connection is made via a cable or telephone company's network. Consumers and the country cannot afford the development of private networks for broadband Internet service. A small number of private networks will not provide adequate competition to prevent the abuse of economic power in the commercial market, or to ensure the free flow of information in the marketplace of political ideas," Cooper concluded.

Full text of the report is available at http://www.consumerfed.org/broadbandaccess.pdf.

TRANSFORMING THE INFORMATION SUPERHIGHWAY INTO A PRIVATE TOLL ROAD

ISSUE BRIEF

THE THREAT OF MONOPOLY POWER

AT&T has acquired cable companies and cable-based broadband Internet service providers (ISPs) and entered exclusive or preferential deals with related companies. The result is an unprecedented consolidation and control over the cable TV industry.

- The central consumer concern is that AT&T is pursuing policies that will not only preserve the cable TV video monopoly, but extend the cable model of a closed, proprietary network to broadband Internet services at the very moment that new technologies could free consumers from what the Department of Justice has called one of the nation's "most durable and powerful monopolies."

Recognizing that federal authorities have not been vigorous in enforcing their own rules to promote and protect competition in recent years, local franchising authorities, like the City of Portland (Oregon) and Broward County (FL), have ordered AT&T to provide nondiscriminatory access to broadband Internet services. AT&T sued Portland, but lost the first round in Federal Court.

At the same time that AT&T has been fighting to operate cable-based broadband networks on a closed, private basis, it has been arguing that high bandwidth telephone facilities (digital subscriber line or "xDSL" facilities) must be operated on an open basis. Needless to say, the local telephone companies have cried foul and are seeking to have their high-speed lane on the information superhighway closed, too. If AT&T manages to close its broadband "pipe," the inevitable result will be the elimination of open access to high bandwidth services on the telephone network as well.

- Access to the broadband Internet will have a tremendous impact on economic, social and political life in the 21st century. Two private toll lanes cannot replace an open superhighway. Two competitors are not enough to ensure competition. Two preferred service providers are not enough to ensure the free flow of ideas in the information age.

CLOSING THE BROADBAND INTERNET THROUGH PRIVATE REGULATION IMPOSED BY CORPORATE INTERESTS

Today, consumers can "dial up" the Internet over the local phone lines. There is no bundling of connectivity (telephone service) and content (Internet service). Any Internet service provider can advertise a phone number and be reached by a local phone call. It is that unfettered access that has been the seedbed of Internet creativity. It is that access that is threatened by the closed access model that the cable industry is pursuing, and of which the Bell monopolies are so enamored.

The cable TV model, based on private carriage, is quite different. Closed system operators choose who has access. Unaffiliated suppliers of content have no way to sell directly to the public. They must negotiate with the owner of the transmission system who sets the terms and conditions of interconnection and can keep them off their networks.

Cities like Portland are not seeking to impose full common carriage obligations on broadband Internet services. Rather, they are seeking a policy of non-discriminatory access, in which cable companies would be able to set reasonable terms and conditions in private negotiations, as long as the same terms and conditions they grant to their own affiliates are available to non-affiliated Internet service providers. The approach has its grounding in the idea of "essential facilities" from antitrust law.

- The purpose of open access is to ensure that consumers have a choice of suppliers of programming by ensuring that competing programmers have an opportunity to access the transmission network. Programs win or lose in the marketplace based on their merits as programs, not based on their preferential access to a proprietary, essential input.

Closed access denies competing ISPs access to an essential resource —cable transmission— which is necessary to compete in the content market, and which cannot be reasonably reproduced by competitors. Open access prevents AT&T from gaining an unfair advantage in the ISP market for its affiliate @Home and RoadRunner.

PREFERENTIAL TREATMENT OF PROPRIETARY PROGRAMMING

AT&T's claim that it will keep its cable network open by providing "one click access" to the Internet is utterly deceptive. In fact, AT&T's subsidiary @Home imposes significant restrictions on access, as described in the following Table.

ANTICOMPETITIVE PRACTICES DIRECTED AT UNAFFILIATED, HIGH SPEED INTERNET SERVICE PROVIDERS

Practice ⇒ Service ⇓	**Denial of Service**	**Degradation of Quality**	**Price Discrimination**	**Steering**	**Abuse of information**	**Bundling**
CABLE	@Home exclusive	Selective speed control; preferential local caching	Consumers pay twice	Boot screen bias	Detailed consumption data to target	Access and content; cable and Internet
TELCO	Withholding availability; delayed provisioning	Overloading switches; restricted cross-connect	Wholesale retail	List bias; omission of alternatives	Advanced notice of availability; abuse of information for customer win-back	Access and content; cable and telephone

AT&T is able to directly discriminate against unaffiliated ISPs in the price and quality of service. Certain services are precluded from being sold. Consumers must pay twice for access to unaffiliated ISPs, once to AT&T/@Home and once to the ISP. Proprietary control of the network allows the closed system operator to control the boot screen that the subscriber sees, which creates the potential to steer customers. The detailed control of the network confers an insurmountable information advantage on the system operator. As a result of these restrictive policies, the offer of competing commercial services is being retarded and consumers are losing crucial alternatives.

One of the first restrictions placed on Internet activity by the cable owners of @Home was to limit the amount of time that streamed video could be downloaded by customers. While AT&T invokes the need to manage its network as a justification for this restriction, the commercial rationale is clear. Broadband Internet services could compete against cable TV offerings by streaming full video programming to consumers. The private regulation driven by corporate interests imposes restrictions to ensure that broadband Internet services will not undermine the cable TV monopoly.

TELEPHONE COMPANY EFFORTS TO CLOSE THEIR NETWORK FOR ADVANCED SERVICES

While AT&T fights to prevent open access requirements from being imposed on its broadband network, the telephone companies have been fighting just as hard to frustrate the open access requirements to which they are subject. Testimony at the Federal Communications Commission and before state public utility commissions, for example, indicates that the local telephone companies have used many of the same discriminatory tools against unaffiliated ISPs that AT&T/@Home use.

Ironically, when the FCC offered the local phone companies a regulatory alternative roughly equivalent to the non-discrimination requirement imposed by the City of Portland, none of them availed themselves of this option. In spite of this record, the local phone companies have sought to remove the open access requirements placed on their advanced services by the Telecommunications Act of 1996. They want a closed pipe, too.

All of these cable and telco practices are anticompetitive and will damage the free flow of services on the Internet. In neither case should they be allowed.

- The abusive treatment of unaffiliated ISPs that will occur in a market populated with closed systems will undermine the fundamental nature of the Internet. Neither cable TV nor telephone companies should be allowed to engage in this type of discrimination.

In federal and state proceedings CFA and its local affiliates have opposed the efforts of the local telephone companies to deny open access to their networks, just as we are opposing the efforts of AT&T in federal and local proceedings to extend closed access to cable-based broadband Internet.

DOES REQUIRING OPEN ACCESS MEAN NO BROADBAND NETWORK?

Certainly, two open pipes are better than two closed pipes. However, AT&T and the telephone companies claim that if open access requirements are imposed, no broadband pipes will be built. They argue that they will not build the broadband network if they must share access with other service providers, because open access makes no business sense.

A surprisingly broad array of financial analysts disagrees. The broadband genie is out of the bottle. Market and technological dynamics will compel both the cable and the telephone companies to deploy the technologies in commercially profitable volumes targeted to the markets for which they are suited, whether or not their networks are open.

- Because AT&T has paid a large premium above the value of simple cable systems it must generate new revenues or its stock value will be sharply diluted. It cannot concede the field to other technologies and try to make its $100 billion investment in cable companies pay off on the basis of cable service alone.

- The local phone companies cannot sit on their hands and allow their networks to become second rate while cable and other technologies develop and market broadband services.
- Both the telephone and the cable industries have identified the same, high-value, high-volume market segment as the key to entry into the multi-service broadband market. Whoever captures these consumers, the "early adopters who are most likely to try and use the new technologies, will gain an invaluable advantage. The companies simply cannot risk losing them.
- The most important sources of revenue on the broadband Internet are targeted advertising and online commerce that require interactive technology.

Not only do the financial analysts believe it would be economically viable to deploy broadband as an open network, in some respects they believe it would be better for the public and the industry because open access could stimulate more rapid deployment of broadband services.

- With more content providers developing and marketing products, consumers adopt the new services more quickly.
- Cable companies can negotiate for a larger share of more types of revenues.
- Intermediate technologies fill important market niches and get affordable service to consumers more quickly when equipment can be developed for both networks.

THE CABLE TV MODEL

A consumer analysis of AT&T's acquisition of cable TV networks and its Internet business model must start from a simple point about 15 years ago. At that time, the rules that govern cable TV were changed to end rate regulation and to allow cable companies to operate their systems as closed, private networks. How have consumers fared since then?

- For most consumers, the result is as evident as the monthly cable bill. Consumers routinely face high bills, poor service quality, and have no real alternative to turn to.

Head-to-head competition between cable companies is virtually non-existent. Cable's dominance as the multichannel medium is overwhelming. Its penetration is over eight times as high as the next multichannel technology, satellite. Its market share in broadband Internet service is even higher.

The same few firms that dominate cable TV distribution also dominate production of programming. The companies involved in the AT&T deals dominate both distribution and programming. The only two widely available cable-based broadband Internet programming services —@Home and RoadRunner— are joined in an AT&T/MediaOne merger

When both distribution and programming are owned by the same companies, there is no incentive to bargain at arms length to drive down the price of programming. The dominant firms control enough of the market to exercise price leadership. They do not have to fear competitive programming since their control of viewers enables them to frustrate entry. They can increase their overall profits by increasing programming prices, since they reap rewards from sales to both integrated and non-integrated distributors.

The most direct manifestation of the consumer complaint against the monopoly, closed-access cable model is in the prices charged to consumers. Cable companies have used their market power to drive prices up faster than virtually every other consumer commodity in the past decade and a half.

- During the periods when cable prices were not regulated they have increased at about three times the rate of inflation.
- For all the talk about changes in technology and more aggressive efforts to stimulate competition in the Telecommunications Act of 1996, cable rate increases since its passage have been greater in real terms than at any time in the history of the industry.
- Not only have prices been increased, but the industry has also restructured its revenue stream to maximize the leverage afforded by its market power. It has engaged in bundling and price discrimination, driving consumers to buy bigger and bigger packages of programs at higher prices.

These anticonsumer pricing practices have already begun to spread to closed cable-based Internet services.

- As an example, MediaOne charges $78 per month to have all tiers of cable TV and Internet service. If a consumer tries to lower the cable portion of the bill by about $20 by dropping a tier of cable TV service, MediaOne will raise Internet service price by rises by $10, without any improvement in the service.
- MediaOne offers to add telephone service to a big communications bundle for about $32, but the current local Bell Atlantic phone bill is only about $30. MediaOne hints that after the proposed merger with AT&T, bundling all services into one package, including long-distance, would provide additional discounts. But if the consumer does not want all the cable programming, he or she is not much better off. The tease of lower prices cannot be realized unless consumers bundle many services together with one provider, adding up a combined monthly communications bill of well over $100.

PROMISES, PROMISES: THE REPEATED FAILURE OF CROSS-TECHNOLOGY COMPETITION UNDER THE COMMUNICATIONS ACT

In order to avoid the harsh light that market structure analysis and the experience in the cable TV industry sheds on AT&T's accumulation of market power in the cable-based broadband industry, AT&T argues that future competition in that market will not allow it to abuse the public. AT&T is telling regulators to ignore the market as it actually is, ignore the highly concentrated cable market that will result from its proposed deals, ignore past experience, and project how the market will operate when new competition emerges.

Unfortunately, the historical experience has proven otherwise and the likely path of future development is no more promising than past failures. Each time that the Congress has attempted to deal with cable TV —deregulation in 1984, re-regulation in 1992 and deregulation a second time in 1996— one of the central goals and claims of the legislation was to foster competition in the industry. In every case, the claims and promises proved wrong.

OPEN ACCESS IS THE RIGHT PUBLIC POLICY

Even if two distribution technologies could share the market, allowing each distribution network to chose a favorite service provider would not ensure effective commercial competition. Such a policy also raises major concerns about the ability of the network to support free expression. Because each technology insists that distribution and content must be linked, we would end up with a choice of a very few, private toll roads on which affiliated information service providers get the best treatment. Under such a model, we would lose the Internet as we know it today—a wide-open forum for communication and commerce.

Almost three-quarters of a century of public policy toward the mass media have been predicated on the recognition of the uniquely powerful impact of that media. Broadband Internet services take the role of the broadcast media to a higher level, adding interactivity to immense reach, real-time immediacy, and visual impact. Because it is such a potent method of information dissemination, economic control over mass media can result in excessive political power. Because the economic interests of media owners influence their advertising and programming choices, private interests inevitably attempt to dictate access to political information.

Proprietary, integrated content simply will not produce the creativity and the openness that have typified the Internet. Empirical evidence clearly suggests that concentration in media markets has a negative effect on diversity. Reliance on economic forces has produced considerable evidence that the market will reduce public interest and culturally diverse programming. News and public affairs programming are particularly vulnerable to economic pressures, resulting in a reduction in the quantity and quality of such programming. The narrow competition between a very small number of delivery mechanisms and their affiliate-favored programmers will dramatically reduce the number of ISPs, restrict content and limit consumer choice.

The reliance on a small number of competing closed networks will result in a failure of ubiquitous universal service. Proprietary networks tend to restrict access to their standards to preserve control. Closed access will slow deployment because of less availability of programming and marketing efforts by ISPs, but it also prevents intermediate technologies that could fill market needs.

CONCLUSION

An open access policy – for cable and telephone broadband services alike -- would simply ensure that consumers would be able to choose from a variety of Internet Service and content providers as they currently can. Open access preserves competition within the Internet marketplace. If AT&T wins the "closed access" provision it is seeking, consumers will be faced with higher prices, lower quality of service, and fewer choices—just as they have with monopoly cable services. In addition, a closed broadband policy would seriously undermine the financial prospects for many of the country's burgeoning high tech companies and entrepreneurs.

Despite AT&T's bluster, this issue is not about regulation of the Internet. The issue is about whether a private monopolist may regulate access to the broadband Internet to further its own private interests, or whether the local government entity that grants a franchise may promote the public interest by guaranteeing open access to the broadband Internet.

The closed, private network model of the cable industry, so coveted by the local phone companies, poses the greatest threat to the liberating influence of the Internet. Combined with the highly concentrated and vertically integrated market structure that AT&T is seeking to impose on the industry through its mergers and related deals, prospects for consumers turn significantly negative as they are faced with the threat of abuse of AT&T's substantial market power and its attendant consequences. If AT&T wins , the local phone companies will surely win, too, and close their networks to non-affiliated content and providers. In other words, a win-win for AT&T and the local phone companies is a lose-lose for consumers.

I. INTRODUCTION

A. EXTENDING THE CABLE TV MODEL TO THE BROADBAND INTERNET

From a consumer point of view, one of the most important issues in the current debate swirling around AT&T's acquisition of cable TV companies is whether the cable TV business model will be strengthened and extended to the Internet.[1] AT&T's sweeping acquisition of cable companies and cable-based broadband Internet service providers along with a series of exclusive and preferential deals with other companies providing similar and related services[2] will result in an unprecedented level of consolidation and control over the cable TV industry.[3] In defending the merger AT&T is pursuing policies that will not only preserve the cable TV video monopoly, but extend the cable model of a closed, proprietary network to broadband Internet services.

Exhibit 1 depicts the various ownership, joint-venture, and leasing arrangements that constitute what can rightly be called a digital, communications conglomerate. AT&T's acquisition of MediaOne and related deals gives AT&T the vast majority of the nations cable TV subscribers, locks in cable TV and Cable-based Internet programming, and awards most of

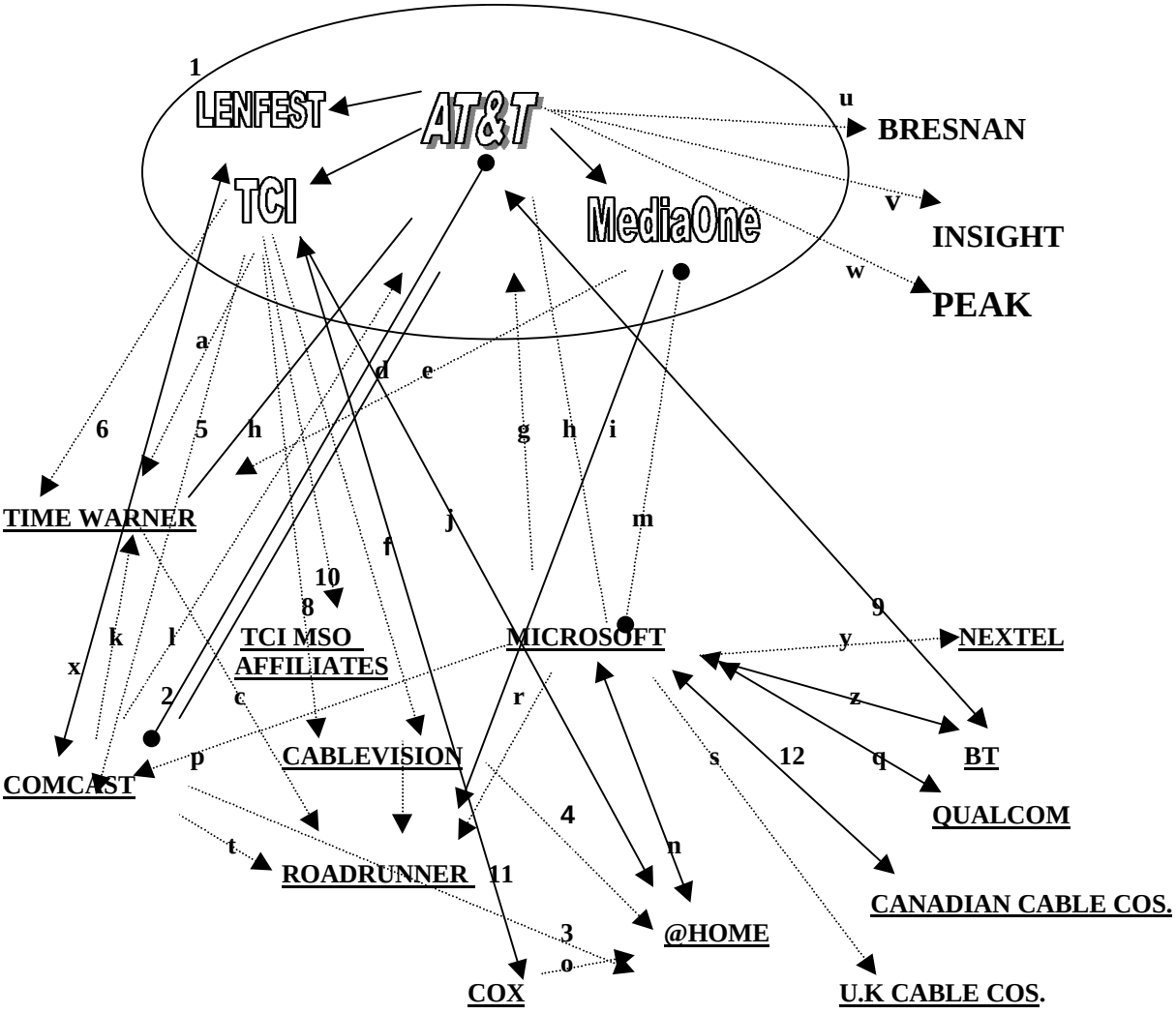
[1] The Consumer Federation of America has analyzed the cable TV model repeatedly over the past decade. See for example, *The Economics of Deregulation and Reregulation in the Cable Industry: A Consumer View* (September, 1993); "Comments of the Consumer Federation of America," *In the Matter of Implementation of the Cable Television Consumer Protection Act of 1992*, Federal Communications Commission, January 23, 1993; "Statement of Dr. Mark N. Cooper," *In re: Petition of Consumers Union and the Consumer Federation of America to Update Cable TV Regulation and Freeze Existing Cable Television Rates*, MM Docket Nos. 92-264, 92-265, 92-266, September 22, 1997.

[2] *In the Matter of Application for Consent to the Transfer of Control of Licenses: Media One Group, Inc. and AT&T*, Applications and Public Interest Statement, Federal Communications Commission (Hereafter, Public Interest Statement).

[3] Consumers Union and Consumer Federation of America, *Breaking the Rules: AT&T's Attempt to Buy a National Monopoly in Cable TV and Broadband Internet Services*, August 1999 (hereafter, Breaking the Rules).

EXHIBIT 1

AT&T' S DIGITAL CONGLOMERATE AT THE HEART OF A BROADBAND CARTEL



LEGEND:
STOCK OWNERSHIP: MAJORITY ——→ ; MINORITY ·····→
JOINT VENTURE: ←——→
USE DEAL: EXCLUSIVE ——— ; PREFERRED ·····
SWEETENERS: ●·····●

DESCRIPTIONS OF RELATIONSHIPS AND IDENTIFICATION OF SOURCES
(in parentheses):

1 = Wholly owned subsidiaries (2)
2 = $1.5 billion breakup fee (10)
3 = Large minority (12); 12% (16)
4 = Minority Ownership (6)
5= QVC joint venture (16)
6 = Programming joint venture through Liberty (22); 10% (16)
7 = Wholly owned (16)
8 = Programming joint venture through Liberty (22); Investment (19)
9 = Joint venture (20)
10 = TCI MSO joint ventures (4)
11 = Programming joint venture through Liberty (22)
12 = Set top box joint venture (15)

a = 10% Ownership of Time Warner (23)
b = Exclusive deal for telephony (6)
c =25% (6)
d = Exclusive deal for telephony (5)
e = 26% (1)
f = 25% (1) (4)
g = 3% ownership (3) (5)
h = Up to ten million set tops guaranteed (3)
i = Majority (5); 25% (6)
j = 39% (6)
k = 25% (6)
l = Exchange of systems is likely to be consummated with a stock swap (2)
m = Microsoft gets to buy MediaOne's European cable systems (9)
n = Windows NT in @Home solutions network (13)
o = Minority (6)
p = 11% ownership (5) (12)(17)
q = Wireless Internet (8)
r = Through Comcast (5)(12); Direct (18); 10% (16) (20)
s = 5% NTL, 30% Telewest, 30% Cable&Wireless (14)
t = Minority (5)(12)
u = 49% (1)
v = 34% via MediaOne (1)
w = Majority (1)
x = Manager of AT&T owned systems (7) (11)
y = 4% (8)
z = Wireless Internet (8)

SOURCES:

(1) "AT&T Household Reach to be Issue in MediaOne Merger Review," Communications Daily, May 10, 1999.
(2) "War Ends: AT&T and Comcast Cozy up in Solomon-Like Deal," Broadband Daily, May 5, 1999.
(3) "AT&T Comes Out on Top in Microsoft Deal," Broadband Daily, May 10, 1999.
(4) "FCC to Scrutinize AT&T MediaOne Deal," Broadband Daily, May 10, 1999.
(5) "AT&T Poised to Regain Long Reach, Via Cable," Washington Post, May 5, 1999.
(6) "AT&T Goes Cable Crazy," Fortune, May 24, 1999.
(7) "AT&T Chief's $120 Billion Plan Capped by Deal for MediaOne," Washington Post, May 6, 1999.
(8) "Microsoft to Buy A Stake in Nextel," Washington Post, May 11, 1999.
(9) Allan Sloan, "AT&T-MediaOne Soap Opera Has Just About Everything," Washington Post, May 11, 1999.
(10) "Pact Ends MediaOne Bid War," Washington Post, May 6, 1999.
(11) "Comcast, in AT&T Accord, Abandons MediaOne Bid," Wall Street Journal, May 6, 1999.
(12) "As Worlds Collide, AT&T Grabs Power Seat," Wall Street Journal, May 6, 1999.
(13) "Microsoft, @Home Make Broadband Pact," ZDNet, May 13, 1999.
(14) "A Contest Is On In Britain to Revolutionize Cable TV," New York Times, May 13, 1999.
(15) "Rogers Communications and Microsoft Announce Agreements to Develop and Deploy Advanced Broadband Television Services in Canada," *Microsoft Presspass*, July 12, 1999.
(16) Schiesel, Seth, "Concerns Raised as AT&T Pursues a New Foothold," New York Times, May 6, 1999.
(17) Fabrikant, Geraldine and Seth Schiesel, "AT&T Is Seen Forging Link to Microsoft," New York Times, May 6, 1999.
(18) Markoff, John, "Microsoft Hunts Its Whale, the Digital Set-Top Box," New York Times, May 10, 1999.
(19) "ACTV Gets Boost from Liberty Digital," Broadband Daily, May 17, 1999.
(20) Wolk, Martin, "Microsoft Poised for Major Role in New Industry," Reuters, May 6, 1999.
(21) Fabrikant, Geraldine and Laura M Holson, "Key to Deal for MediaOne: Keeping the Losing Bidder Happy," New York Times, May 6, 1999.
(22) Federal Communications Commission, In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CC Docket No. 98-102, Fifth Report, Table D-6.
(23) Federal Communications Commission, In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CC Docket No. 98-102, Fifth Report, Table D-1.

initial deployment of set-top boxes to Microsoft. It would own a substantial interest in the two dominant cable-based Internet service providers, @Home and RoadRunner. A recently released consumer-oriented analysis shows that the AT&T deals violate both the Department of Justice Guidelines on mergers and the Federal Communications Commission limits on ownership of cable distribution.[4] The concentration of market power in the cable distribution industry, cable programming market, and the cable-based broadband Internet market that would result far exceed the reasonable limits established by public policy in the past decade.[5] Furthermore, the vertical integration across all of the industries through ownership, joint ventures, leasing arrangements and preferential deals raises further concerns.

Recognizing that federal authorities have not been vigorous in enforcing their own rules to promote and protect competition in recent years, local governments have joined the debate. Although the 1984 Cable TV Act stripped local governments of many of their rights to regulate cable TV (particularly their rate making authority), [6] it did preserve some of their rights as a franchising authority. Within months of the announcement of the MediaOne deal, a Federal District Court judge ruled that the City of Portland, as the franchising authority for cable

[4] Breaking the Rules.

[5] Both the relevant policies were put in place in 1992. The telecommunications policy is embodied in the *Cable Television Consumer Protection and Competition Act of 1992* (codified as 47 U.S.C. Section 533) (hereafter the 1992 Act). The antitrust policy is embodied in the Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, April 2, 1992.

[6] *The Cable Communications Policy Act of 1984* (codified as 47 U.S.C. section 521) (hereafter the 1984 Act).

services, had the right to order AT&T to provide nondiscriminatory access to broadband Internet services.[7]

AT&T insisted that its legal right to sign an exclusive contract with an Internet service provider took precedence over the right of the franchising authority to impose an open access requirement. It threatened not to deploy the service if open access was imposed.

> AT&T says the ruling is a catch-22 because the company's contract with @Home grants @Home exclusive distribution rights on AT&T's cable network.
>
> "They have put in place an ordinance we cannot comply with legally or technically," says Jim Cicconi, AT&T's general counsel. "It is not a condition with which we can comply and still deploy the @Home offer. The real losers in this decision, until it is overturned, are the people of Portland."
>
> In response to AT&T's vow to withhold @Home, Portland officials are considering opening the city's nonexclusive franchise to a second operator.[8]

Similar disputes relating to the transfer of TCI licenses bubbled up in cities across the country.[9] Broward County, Florida voted for open access.[10] A technology commission in Los Angeles experienced the resignation of three of its members (thereby losing its quorum) in protest over a report that argued against imposing open access on cable broadband Internet services.[11] Similar disputes arose in San Francisco, where the City Council rejected a staff report

---

[7] *AT&T Corp.; Tele-Communications, Inc.; TCI Cablevision of Oregon, Inc.; and TCI of Southern Washington v. City of Portland and Multnomah County*, United States District Court for the District of Oregon, CV99-65-PA, June 3, 1999.

[8] Colman, Price and Bill McConnell, "AT&T's Got the Unbundling Blues," *Broadcasting & Cable*, June 14, 1999 (hereafter, Unbundling Blues).

[9] Quinton, Brian, "Cities Prep for AT&T Siege," *Telephony*, June 28, 1999.

[10] Chen, Kathy, "Another Local Government Votes to Open Cable Lines to Competition," *Wall Street Journal*, July 14, 1999.

[11] Guy, Sandra, "Cities March Noisily Into Internet Access Battle," *Techweb*, June 22, 1999; Mullen, Alex, "Broadband Access Battle Erupts," *ZDTV*, July 8, 1999; Grice, Corey, "Cities Take Open Access Fight to the FCC," *CNET News*, June 21, 1999.

that failed to recommend open access[12] and later voted to declare a general commitment to open access and to join in the Portland suit, but put off a decision on open access requirements.[13] Counties weighed in on the side of open access.[14] Washington policymakers were also active in the broadband issue, with hearings[15] and legislation introduced on all sides of the issue.[16]

The AT&T MediaOne merger also raised another set of concerns because it included a deal with Microsoft to supply a very large part of the initial orders for set-top boxes to deliver broadband services. With Microsoft embroiled in the most celebrated antitrust case since the AT&T monopoly was broken up, as a result of a similar case, concerns were expressed that the deal gives Microsoft the inside track in providing the operating system for broadband set-top boxes. As part of the final deal Microsoft will be allowed to deploy between 7.5 and 10 million of the first set-top boxes.[17] This agreement immediately drew analogies between the interactive broadband market and the PC market.

> The laggards feared that they would inevitably fall victim to the same forces that enabled Microsoft to reduce many PC hardware makers to mere purveyors of commodity goods.
>
> But Microsoft's considerable financial heft has eroded most resistance. Besides the Comcast stake, Mr. Gates' investments in pursuit of interactive digital TV

[12] Solomon, Deborah, "S.F. Board President Opposes AT&T Cable Plan," *San Francisco Chronicle*, June 24, 1999.

[13] Healy, Jon, "AT&T Wins S.F. Vote on Access," *Mercury News*, July 28, 1999; "AT&T and Opponents Both Claim Victory in San Francisco Vote," *Broadband Daily*, July 28, 1999.

[14] Seminerio, Maria, "Counties Call for Open Access," *ZDNet*, July 20, 1999.

[15] Woods, Bob, "AOL, Cable Execs, Sprint, Square Off Over Broadband Access," *CNNfn*, June 24, 1999; Cable Honchos Fumble Senate Appearance," The *Industry Standards*, July 15, 1999.

[16] Rick Boucher, "Internet Growth and Development Act of 1999"; Bob Goodlatte, "Internet Freedom Act;" Billy Tauzin and John Dingell, "The Internet Freedom and Broadband Deployment Act of 1999; Ed Markey, "Concurrent Resolution;" Earl Blumenauer, "Consumer and Community Choice Access Act."

[17] Austria, Melanie, "Microsoft, AT&T in $5 Billion Pact," *CENT News.Com*, May 6, 1999.

> have included WebTV, Time Warner's Road Runner, four European interactive cable television investments and, finally, last week's investment in AT&T.
>
> In return for a $5 billion stake, AT&T has warily agreed to license a minimum of five million copies of Microsoft's Windows CE operating system and engage in several showcase tryouts of the software, the consumer electronics version of Microsoft's industry-dominating Windows software for PCs.
>
> The deal will ensure that Microsoft gets an inside track in the new interactive television industry, which after years of delay appears to be showing signs of life.[18]

In fact, after securing preferential access to as many as 10 million of AT&T broadband cable subscribers, Microsoft inked another deal with @Home, a subsidiary of AT&T, to extend its reach even further by capturing part of the server side of the market.[19] It quickly signed similar deals with other cable companies to provide software and acquired interests in other companies,[20] increasing its early advantage and extending its reach into foreign cable markets.[21]

B. GROWING CONTROVERSY

AT&T's acquisition of MediaOne will likely stimulate many more debates at the national and local level for several reasons.[22]

---

[18] Markoff, John, "Microsoft Hunts Its Whale, the Digital Set-Top Box," *New York Times,* May 10, 1999.

[19] Boersma, Matthew, "Microsoft, @Home Make Broadband Pact," *ZDNET*, May 13, 1999.

[20] ; Bank, David, "Microsoft to Invest $600 Million in Nextel," *Wall Street Journal,* May 11, 1999; Broadband Daily, *Microsoft's Broadband Investments Total $11 Billion,* June 11, 1999; Bruznick, Alan, "Microsoft Sinks $30 Million into Wink," *Cable World,* June 14, 1999.

[21]Cowell, Alan, "A Contest is On In Britain to Revolutionize Cable TV," *New York Times,* May 13, 1999; "Rogers Communications and Microsoft Announce Agreements to Develop and Deploy Advanced Broadband Television Services in Canada," *Microsoft Presspass,* July 12, 1999.

[22]Scott Cleland, a financial analyst for Legg Mason, who is quite active in testimony before Congress on public policy issues relating to the telecommunications industry, offered a similar list of reasons that open access was receiving increasing attention (see Cable "Unbundling Risk Increasing – Already a 'Little Bit Pregnant?'," *The Precursor Group, Legg Mason Technology Team,* October 28, 1998 (Hereafter, Unbundling Risk).

- First, many TCI licenses were transferred before the open access issue was fully understood. All of the MediaOne licenses will be closely scrutinized.[23]

- Second, MediaOne has a disproportionate share of very large, attractive communications markets.

- Third, MediaOne's plant has already been upgraded to compete in the new telecommunications industry. If MediaOne cannot go it alone, it seems unlikely that any other independent cable companies will be able to. Thus, the prospect of a national monopoly in distribution arises.[24]

- Fourth, the deal involves AT&T in the ownership of the only two cable-based broadband Internet service providers (@Home and RoadRunner). [25] The addition of MediaOne to AT&T's cable holdings and the other side deals makes it clear that something approaching a national monopoly is emerging. It raises doubts that competition to deliver broadband programming services will ever materialize.[26]

- Finally, the Portland court case reassures citizens and local governments that the fight to impose open access requirements at the local level is worthwhile.

---

[23] Unbundling Risk,

> When people learn more about the issue they realize that a proprietary cable "pipe" serves no interest other than that of cable owners.

[24] Unbundling Risk,

> Regulators are concerned that he cable industry may be planting the seeds to monopolize the residential broadband market, like they have attempted to dominate the video market. Competitors are coming out of the woodwork to complain about cable's proprietary business model for broadband. The complaints are not falling on deaf ears. Earlier this year, the Justice Department blocked a cable consortium from buying one of their DBS competitors Primestar.

[25] Unbundling Risk,

> Now regulators are suspiciously sniffing around the exclusive cable co-ownership supply agreements behind the @Home and RoadRunner to determine if there are any anti-competitive effects.

[26] Unbundling Risk,

> Regulators are also concerned that the cable industry may be trying to "lock out" competition by jointly selecting an industrywide data protocol that inefficiently channelizes bandwidth rather than using "statistical multiplexing," which optimizes available bandwidth. By suboptimizing, cable can more easily argue there is not enough bandwidth to share with competitors.

AT&T's position with respect to open access has an ironic twist. At the same time that it has been fighting to ensure that its cable-based broadband networks be operated on a closed, private basis, it has been arguing that facilities to support high bandwidth service deployed by local telephone companies be operated on an open basis. The most recent skirmish has taken place in reaction to AT&T comments on the SBC-Ameritech merger.

> On the separate-affiliate issue, the long distance players said the FCC failed to prevent SBC-Ameritech from giving its affiliate better terms and conditions than DSL competitors seeking to use the Baby Bells' loops to reach end-users.[27]

Needless to say, the local telephone companies have cried foul and have sought to close their high-speed lane on the information superhighway closed, too.

> In a press release, SBC and Ameritech shot back that the LDCs [long distance companies] were attempting to block competition.
>
> The statement took direct aim at AT&T's cable-television system investments and the company's Internet-access strategy which caused unaffiliated Internet-service providers to seek government intervention at the state and federal levels.
>
> It's the height of hypocrisy for AT&T to criticize the SBC and Ameritech merger while creating its second national monopoly this century and threatening to halt investment in its cable network if the FCC asks AT&T to comply with the same laws as SBC and other regional Bells.[28]

The track record of the local phone companies in providing access to their advanced network facilities leaves a great deal to be desired, even though they are under a legal obligation to provide nondiscriminatory common carriage (a stronger form of open access).[29]

---

[27] Hearn, Ted, "AT&T, Others Oppose SBC-Ameritech Merger," *Multichannel News*, July 26, 1999 (hereafter, SBC-Ameritech Merger).

[28]SBC-Ameritech, Merger.

[29] See for example, Vaughn Nichols, Steven J., "DSL Spells Trouble For Many ISPs," *ZDNet*, February 2,4 1999; Barrett, Randy, "Is U S West Monopolizing XDSL?," *ZDNet*, February 17, 1999; and chapter IV below.

Judging from press accounts, these local fights are certain to be intense.[30] The lobbying has been furious.[31] AT&T and the cable companies are on one side; AOL, smaller ISPs and the telephone companies are on the other.[32] As the *Economist* noted, the parties with a commercial stake in the battle have not endeared themselves to the public with their pricing policies or service ethics and certainly not with their openness to competition.

> Finding regulators sympathetic to the Baby Bells may be as difficult as finding consumers who like their cable company. But another wounded party is America On-line, which has already protested about the way cable firms promote their own high-speed broadband services, such as @Home, and insist on charging consumers extra to use AOL. Its pleas for open access to these networks may carry more weight with federal regulators.[33]

C. PURPOSE AND OUTLINE OF THE PAPER

Consumer advocates may find the prospect of getting into the middle of a dirty and bloody fight between these commercial interests less than attractive, but the issue at stake is too important to ignore. This paper makes the case that consumer advocates should get involved in support of open access.

First, access to the broadband Internet will have a tremendous impact on economic, social and political life in the 21st century.[34] If AT&T manages to overturn the open access decisions

---

[30] "Media Slowly Tracks Cable-Access Issue," *Industry Standard*, July 21, 1999; Healy, Jon, "ISPs Cable Firms Battle Over Access," *San Jose Mercury News*, July 18, 1999; Mullen, Alex, "Broadband Access Battle Erupts," *ZDTV News*, July 8, 1999.

[31] Labaton, Stephen, "Fight for Internet Access Creates Unusual Alliances," *New York Times*, August 13, 1999.

[32] Unbundling Risk,

> Many more interest are "piling on" the unbundling bandwagon and precious few are coming to the defense of the cable industry on this issue.

[33] "The Carve-up," *The Economist*, May 8, 1999.

[34] The observation hardly needs demonstration and volumes have been written about it. Two recent works that cover the potential to enfranchise the disenfranchised include Shapiro, Andrew L. *The Control Revolution* (Century

made by an increasing number of cities and the FCC continues to oppose open access requirements, the inevitable result will be the elimination of open access to high bandwidth services on the telephone network as well. Two private toll lanes cannot replace an open superhighway.

Second, as previously noted, federal authorities seem unlikely to prevent the merger from going forward. They are more likely to place conditions on it. One of the central possible remedies may be open access to cable-based broadband Internet services.

Third, the fact that local authorities have a direct link to the open access debate makes it even more attractive as a point of leverage. The issue is removed from the backrooms of Washington and subject to much greater public scrutiny and more diverse input.[35]

Fourth, ironically, outcomes that are truly in the public interest have a tendency to emerge when powerful commercial interests cancel each other out, as may happen in this case. Because the commercial interests may neutralize each other, it possible to have two open networks to promote broadband Internet services.

This paper reviews the question of access to the broadband Internet from the consumer point of view by starting from the only place such an analysis can begin, the treatment of consumers under the closed access model used by the cable TV industry in the past 15 years. That is the model that the cable TV industry, led by its new dominant firm, AT&T, is fighting to

---

Foundation, New York: 1999); Schon, Donald A,. Sich Sanyal and William Mitchell, *High Technology and Low-Income Communities* (MIT Press, Cambridge: 1999).

[35] Department of Justice merger investigations are conducted with the utmost of secrecy. The DOJ asks questions in private and negotiates with parties, barely even acknowledging that an investigation is under way. The Federal Communications Commission typically takes written testimony and hears from a small number of experts, but does not allow discovery or cross-examination. Once the issue has moved to the front burner at the local level, it has resulted in an intense public information gathering process.

impose on the Internet. The paper also considers whether there are other technologies or companies that could break the monopoly hold of this model.

The paper is divided into two parts.

Part I examines the way both cable TV and telephone companies are seeking to impose a closed, proprietary model on the high-speed Internet. It also considers whether investment would be forthcoming if an open access requirement is upheld.

> Chapter II: What is the legal, technological and economic basis for discrimination and How does AT&T plan to extend the cable TV model to the broadband Internet?
>
> Chapter III: How have the exclusionary tactics been implemented?
>
> Chapter IV: How have the telephone companies sought to close their advanced services network?
>
> Chapter V: Is the choice really between a closed broadband Internet and no broadband Internet at all, as AT&T claims?

Part II reviews the consumer experience under the cable TV model, since this is the model that AT&T is extending to the Internet.

> Chapter VI: What is the industry structure that has developed in the deregulated, closed access cable environment created after the 1984 Cable TV Act?
>
> Chapter VII: How have consumers fared under that closed access model?
>
> Chapter VIII: What is the track record of head-to-head cable competition and alternative technologies in creating a competitive cable TV market?

The conclusion in Chapter IX considers the pressing public policy questions posed by the effort to implement cable-based broadband as a closed network. It asks what are the implications of the development of a small number of closed proprietary networks to deliver broadband Internet service?

PART I:
EXTENDING THE CLOSED CABLE MODEL TO THE BROADBAND INTERNET

II. CLOSING THE BROADBAND INTERNET THROUGH PRIVATE REGULATION IMPOSED BY CORPORATE INTERESTS

A. MODELS OF INTERNET ACCESS

1. TELEPHONE COMMON CARRIAGE

In order to appreciate how important the issue of open broadband access o the broadband Internet is to consumers, the radical change in Internet access that AT&T's model represents must be understood. Today, consumers can "dial up" the Internet over the local phone lines. There is no bundling of connectivity (telephone service) and content (Internet service). Any Internet service provider can advertise a phone number and be reached by a local phone call.[36]

Henry Geller, former General Counsel at the FCC and Administrator of the National Telecommunications and Information Administration describes access to today's Internet as follows:

> Today the guiding principle of telecommunications/information policy is *entry*. As to access to the Internet, there is now such open entry. Any entity, using the facilities of the local telephone company, can become an Internet service provider.
>
> The local telco itself is usually an ISP, but because it is a telecom common carrier, it must afford access to all its rivals and permit resale of its transmission services.
>
> Access today for residential customers is "narrowband." The full potential of the Internet for commerce, information and entertainment cannot be achieved without broadband access. The telcos propose to provide such access through a technique called digital subscriber line.
>
> In doing so, they remain subject to considerable regulation. But there is no controversy that the telco must continue to make its transmission facilities

[36] The Federal Communications Commission is in the process of redefining a call to an Internet service provider as a long distance call (emphasis added).

> available to all comers, and thus, as to telcos there will continue to be wide-open competition among ISPs.[37]

The unbundling of access to the network and content is absolute. It is that unfettered access that has been the seedbed of Internet creativity. It is that access that is threatened by the closed access model the cable industry is pursuing.

Open Internet access via the telephone network is grounded in common carriage principles that have governed the phone network for almost a century. Morgan Stanley Dean Witter, in a recent analysis of the emerging communications/broadcast industry, describes common carriers as follows:

> Generally, they are involved in the sale of infrastructure services in transportation and communications. The legal principle of common carriage is used to insure that "no customer seeking service upon reasonable demand, willing and able to pay the established prices, however, set, would be denied lawful use of the service or would otherwise be discriminated against."
>
> Significantly, a carrier does not have to claim to be a common carrier to be treated as such under the law: a designation of common carriage depends upon a carriers actual business practices, not its charter.
>
> Common carriage is also thought to be an economically efficient response to reduce the market power of carriers through government regulation, preventing discrimination and/or censorship and promoting competition. It is also said to promote the basic infrastructure, reduce transaction costs from carrier to carrier, and extend some protections for First Amendment rights from the public to the private sector.[38]

2. CABLE TV PRIVATE (CONTRACT) CARRIAGE

The cable TV model, which is based on private carriage, is quite different. Closed system operators may choose who has access to the "pipe." Unaffiliated content providers have

[37] Geller, Henry, "The FCC and Internet Access," *Electronic Media*, April 19, 1999.

[38] Morgan Stanley Dean Witter, *The Digital Decade* (hereafter Digital Decade), April 6, 1999, pp. 177-178.

no way to market directly to the public. In order to be seen, they must negotiate with the owner of the transmission system who set the terms and conditions of interconnection without open access obligations.

Geller describes the cable approach as follows:

> Cable is also initiating a program for broadband access to the Internet through cable modems (called @Home or RoadRunner). But unlike the telco situation, cable ties its broadband transmission service together with taking cable as an ISP – that is, it bundles the transmission service with the information service.
>
> Further, it will not permit any unbundling so that the transmission service is not available to rival ISPs. It asserts that the bundle is not a telecom service but simply another cable service.
>
> Cable, which has a monopoly today in multichannel video distribution, is seeking to gain control over cable subscribers' use of the Internet.
>
> Through its bundling requirement and refusal to allow rivals access to its broadband transmission facilities, it becomes the Internet gatekeeper for all those who sign up to obtain cable broadband access.
>
> If this is just another cable service, the cable operator can decide what information should come to the subscriber. It can refuse to allow other information services on its own cable channels.[39]

Morgan Stanley Dean Witter draws a sharp distinction between the treatment of cable and that of common carriage:

> In the 1984 Cable Act, cable services were able to avoid common carrier regulation for two reasons: first, cable service would involve only one-way transmission; and second, its content would be similar to that provided by broadcast television stations in over-the-air transmission. This preserves cable's states as a contract carrier. Contract carriers are not constrained by the requirements of common carriage and have no regulatory mandate to serve everyone on the same terms. Therefore, they have more flexibility to price discriminate than a common carrier, be selective about their customers, and benefit from the management of competition among their customers.

---

[39] Geller.

> However, due to the variety of new services that the cable industry is rolling out (including high-speed data services and telephony), cable systems potentially could be viewed as common carriers.[40]

3. NON-DISCRIMINATORY OPEN ACCESS

Cities like Portland have not sought to impose full common carriage obligations on broadband Internet services. Rather, they are seeking a policy of non-discriminatory access. Cable companies would be able to set reasonable terms and conditions in private negotiations, as long as the same terms and conditions they grant to their affiliates are available to non-affiliated Internet service providers. The Judge in the Portland case summarized this approach as follows:

> The Commission found that @Home had no viable competitor in the local retail market for residential Internet services. The Commission recommended that the City and County regulate AT&T's cable modem platform as an "essential facility" to protect competition. "Essential facility" is a term of art in antitrust law, meaning a facility that competitors cannot practically duplicate and that is otherwise unavailable. See Image Technical Service., Inc., v. Eastman Kodak Co. 125 F.3d 1195, 1210 (9th Cir. 1997), cert. Denied, 118 S. Ct. 1560 (1998). A business that controls an essential facility may not exclude competitors without a "legitimate business reason for refusal." City of Anaheim v. Southern California Edison Co., 955 F. 2d 1272, 1379 (9th Cir. 1992).
>
> The Commission intended that the open access requirement allow customers of unaffiliated ISPs to "obtain direct access to their [ISP] of choice without having to pay the full @Home retail rate. Defs. Mem in Supp. Of Cross Mot. At 5. Unaffiliated ISPs would not get a free ride on the cable modem platform. They would pay AT&T for access.[41]

As the citations in the Portland ruling indicate, the essential facilities cases are quire recent. In fact, the idea of essential facilities in communications networks and high technology

[40] Digital Decade, p. 177.

[41] Portland Opinion, pp. 4-3.

industries has received a great deal of attention, in part as a result of the Microsoft antitrust case, although a long line of cases affecting electronic networks exists.[42]

The antitrust principle is simple. AT&T gains an unfair advantage in the ISP market for its affiliate @Home, by denying competing ISPs access to a resource – cable transmission – that is necessary to compete in the market and which cannot be reasonably reproduced by the competitor.[43] The purpose is to ensure that consumers have a choice of suppliers of programming by ensuring that competitors have an opportunity to access the transmission network. Programs win or lose in the marketplace based on their merits as programs, not based on their preferential access to an essential input.[44]

B. PREFERENTIAL TREATMENT OF PROPRIETARY PROGRAMMING

Although AT&T has claimed that it plans to keep its cable network open by providing "one click access" to other Internet service providers, that claim is utterly deceptive. In fact, AT&T's subsidiary @Home imposes significant restrictions on access to services, features and

[42] Piraino, Thomas A. Jr., "Antitrust Remedy for Monopoly Leveraging by Electronic Networks," *Northwestern University Law Review*, 93:1, 1998 (Hereafter, Monopoly Leveraging).

[43] Monopoly Leveraging, p. 6.

> The essential facilities doctrine, which was first adopted by the Supreme Court in 1912, recognizes that a monopolist can gain an unfair competitive advantage in a related market by denying its competitor the right to access a resource required to engage in effective competition in that market. Indeed, one of Congress's principle goals when it enacted the Sherman Act in 1890 was to prevent the Standard Oil Trust from denying other oil refiners the right to use the pipelines and rail transportation facilities necessary to bring their products to market.

[44] Monopoly Leveraging, p. 7.

> By requiring open access to other networks that constitute the only means of entering a particular market, the courts and antitrust enforcement agencies can insure that consumers retain the benefits of competition in those industries as well.

content. As a result, AT&T is able to directly discriminate against unaffiliated ISPs. Among other things:

- Certain services are precluded from being sold by AT&T/@Home.
- Consumers must pay twice for access to unaffiliated ISPs, once to AT&T/@Home and once to the ISP.
- AT&T/@Home restricts the nature of downstream services to preclude streaming video from competing with cable.
- AT&T/@Home restricts the speed of upstream transmission.

For a company that claims to be against regulation, it imposes a great deal of private regulation on Internet service providers and its customers because AT&T/@Home exercises control over the applications, the conduit, and the technology. AT&T's acquisition of cable TV and cable-based broadband Internet service providers and its alliance with Microsoft, together with its staunch defense of closed access to the cable network, ensures that the closed cable TV model is imposed on the broadband Internet access. For the foreseeable future, cable technology is superior to alternatives for delivering broadband Internet services, and these services are certain to be the driving force behind the economic expansion of the Internet. As a result, the imposition of the cable TV model may fundamentally alter the nature of the Internet.

The cable TV model is inconsistent with the free flow of information and services that is the essence of the Internet. To succeed, the cable model must control flows as well as applications. Cisco, a leading equipment supplier, makes the point quite clearly in touting the technology of cable-based broadband Internet.

> Some MSOs [Multiple System Operators] are hesitant to deploy IP [Internet Protocol]-based networks because they fear they will not be able to control them. They are concerned that other content providers will flood their networks with bandwidth hogging services, particularly video, making it difficult to maintain a balanced, high-quality service delivery for all subscribers.

> Sustained service quality over the long term requires IP-network control, being able to intelligently segment and manage resources by user type, service, destination, or application so that delivery quality does not suffer with growth or the addition of new services. That is the job of Cisco IOS QoS [Quality of Service]…
>
> **The ability to prioritize and control traffic levels is a distinguishing factor and critical difference between New World networks employing Internet technologies and "the Internet…"**[45]

The fundamental difference between an open access model and a closed proprietary system that regulates traffic to accomplish corporate goals is the discrimination against unaffiliated content providers. In a nondiscriminatory, open access system, the transportation provider profits from the maximum movement of traffic. In a closed system, the integrated transportation/content provider maximizes profits by ensuring that the content it owns moves first and fastest and the traffic of its competitors moves last and slowest, if at all.

Cisco goes on to describe the technological capabilities of the "New World Internet Business Model" as follows:

> For example, if a "push" information service that delivers frequent broadcasts to its subscribers is seen as causing a high amount of undesirable network traffic, you can direct CAR [Committed Access Rate] to limit subscriber-access speed to this service. **You could restrict the incoming push broadcast as well as subscriber's outgoing access to the push information site to discourage its use. At the same time, you could promote and offer your own or partner's services with full-speed features to encourage adoption of your service, while increasing network efficiency.**
>
> **CAR also lets you discourage the subscriber practice of bypassing Web caches. It gives you the ability to increase the efficiency of your network by allocating high bandwidth to video and rich media coming from a Web-cached sources and low bandwidth to the same content coming from an uncached source…**

[45] *Controlling Your Network – A Must for Cable Operators*, Cisco Systems, 1999, pp. 2…3 (hereafter, Controlling). Emphasis add.

> **Further, you could specify that video coming from internal servers receives precedence and broader bandwidth over video sources from external servers…**
>
> **Another backbone-based control capability offered by Cisco QoS is the combination of preferential queuing (PQ) and weighted fair queuing (WFQ).**
>
> **PQ ensures that important traffic gets the fastest handling at each point where it is used. Because it is designed to give strict priority to important traffic, PQ can flexibly prioritize according to network protocol incoming interface, packet size, source or destination address.**[46]

Simply put, the technology allows pervasive discrimination against external, unaffiliated service providers. Moreover, this idea of a "New World Network," is not limited to marketing documents targeted to MSOs, it is Cisco's general model for Internet development.[47]

Manufacturers of network infrastructure are not the only ones who sell control as a critical function of the new interactive, cable-based broadband network. Set-top box manufacturers stress similar points. As Scientific Atlanta put it:

> Conditional Access (CA) systems provide for selective access and denial of specific services. They also employ signal security techniques, such as encryption, to prevent a signal from being received by unauthorized users.
>
> In addition to protecting traditional broadcast content, a contemporary CA system also must support interactive applications, such as electronic commerce, video-on-demand, and high-speed data access. And it must protect against tampering with authorized applications, downloading viruses, or downloading unauthorized applications to the set-top.[48]

---

[46] Controlling, pp. 5… 6.

[47] Young, Jeffrey, "The Next Net," *Wired*, April 1999, p. 150; "Cisco Systems and Excite@Home Take the "cable Internet Revolution Expo to 20 cities Throughout North America," June 14, 1999.

[48] *The Interactive Digital Network: More Than Just a Set-Top Decision*, http://www.scientificatlanta.com/DigitalNetowork/index.htm (Hereafter Interactive Digital Network).

@Home, the dominant cable-based Internet service provider, is frank about its intentions to link proprietary content to its control of the broadband pipes. As the company's president (George Bell) put it:

> Bell said that one of the company's major tasks is to develop special content or ally with developers dreaming up products that take advantage of @Home's bandwidth to get into consumers' homes. "The power has to be proprietary content," Bell said. "People don't watch distribution."[49]

@Home will use its preferred position as an exclusive cable-based Internet service provider to win the battle to get proprietary content into people's homes.

> Not so fast, said Milo Medin, Excite@Home's chief technology officer. If ISPs want what he has – partnerships with 21 cable operators worldwide – it will take more than sharing a little subscriber revenues…
>
> Medin said if Prodigy and other ISPs don't like the current situation, instead of running to regulators for help, they should get behind DSL, or wireless or satellite access. Or, if they're so keen on cable, said Medin, they should string their own wires, or "overbuild" as it's called in the cable industry.[50]

Leveraging control over the bottleneck infrastructure is the key to exercising market power and capturing the economic rents that are available. As a *New York Times*, article put it,

> As a result, the companies that control the assets – the optical fiber, the switches, the advanced gear for transmitting data from one point to another – control the pricing of communications services. These companies also reap most of the profits. It is very difficult to generate long-term success in the communications business by leasing communications capacity from others…
>
> AT&T is pursuing much the same strategy, but using cable television systems rather than traditional phone lines. When America Online and other Internet service providers complain that AT&T will not have to offer use of its cable systems to other Internet service providers, what they really fear is the prospect

[49] Higgins, John M., "No Worries on the @Home Front," *Broadcasting and Cable*, July 5, 1999.

[50] McWilliams Brian, "Prodigy Stumps for Access to Cable," *Internet News.com*, July 23, 1999.

> that AT&T will sell access to those systems at prices that keep the bulk of the profits for itself.[51]

C. COMPETITIVE ADVANTAGE GAINED THROUGH DISCRIMINATION

The squeeze that can be placed on unaffiliated programming content by this business model is apparent. By controlling a bottleneck, private regulation places price and quality conditions on unaffiliated content providers that undermine their ability to compete.

Consumers will have to pay twice for Internet access – once to AT&T's affiliate and a second time to any non-affiliated ISP the consumer wants.

> So the cable companies are fighting bitterly to maintain that control, refusing to allow other Internet providers to gain the same kind of access to the cable lines that @Home now enjoys by default. Here's an upgraded definition of two-way, cable-style: We'll send you the Internet services – e-mail, home banking, etc. – that we designate, and you'll send us a bigger check. If you want a different Internet service provider, fine – just send them a check, too.[52]

> Customers can connect to any Website and can view content from other providers such as AOL, but they must pay AOL's subscription fee on top of the full @Home fee.[53]

Quality discrimination can be as damaging as price discrimination. As an Internet technology publication put it with respect to quality:

> In addition, because @Home caches content locally, its own content will have better apparent bandwidth than that of third-party content providers. Because @Home makes money through advertising and commerce partnerships, the company has little incentive to provide higher-speed connectivity to outside content.[54]

---

[51] Schiesel, Seth, "Start-Up Leads Phone Cause in Battle for Internet Access," *New York Times*, May 17, 1999, p. c-4.

[52] Gillmor, Dan, "AT&T Deal Provides No Help to Consumer," *Mercury Center*, May 5, 1999.

[53] Werbach, Kevin, "The Architecture of Internet 2.0," *Release 1.0*, February 1999 (hereafter, the Architecture), p. 4.

[54] The Architecture, p. 4.

Proprietary control of the network also allows the closed system operator to control the boot screen that the subscriber sees which creates the potential to steer customers. The initial boot screen is like prime real estate and advertising space. Location on the initial screen can predispose customers to use affiliated services at the expense of unaffiliated services. The system owner takes the best location for itself and locks out or downgrades others.

> AT&T also controls @Home Network Inc., the Internet service provider to which AT&T cable customers are forced to subscribe if they want high-speed data access via the cable lines. MediaOne is co-owner of a weaker cable-internet provider, RoadRunner, and it's safe to assume that @Home will eventually be the cable-Internet service provider for the MediaOne customers, too. Most likely, RoadRunner itself will become part of @Home before long.
>
> AT&T and other cable companies understand the power of owning the first screen of digital information. It's the front page to the digital world – an enormous asset in selling customers' attention to advertisers and other companies.[55]

Control of the boot screen also ensures that the direct relationship is with the transmission service provider.

> @Home controls the cable modem in the user's home and functions as the service provider. Users cannot pay a reduced fee for the high-speed pipe alone; they must purchase the @Home ISP and content offerings. Even if a user pays for another ISP's services on top of the @Home subscription fee, the primary customer relationship is still with @Home. Independent ISPs such as MindSpring and Earthlink have no control over the user's connection setup and thus cannot compete on customer service or reliability. @Home has been the focus of the most attention because of the AT&T/TCI merger, its extensive use of local caching and its larger user base.[56]

The detailed control of the network also confers an immense information advantage on the system operator. For example, a Cisco document suggests the following.

> Cable operators must build into the network the ability to monitor traffic in detail. As new applications emerge, cable operators can capitalize on innovation by

[55] Gillmor, Dan, "AT&T Deal Provides No Help to Consumer," *Mercury Center*, May 5, 1999.

[56] The Architecture, p. 4.

> monitoring network usage and developing service around these applications. The Cisco Systems NetFlow technology is an example of the products that exist today that can monitor traffic patterns and technology in detail.[57]

As with other aspects of the technology, Cisco's enthusiasm as a vendor of equipment is echoed by other participants in the industry.

> If you have in one place all of the information about the particular customer and the usage of that customer, or how often that customer uses all of the particular services he or she is buying from you, you can be a lot more sophisticated in identifying clients that are most likely to churn. A truly convergent billing process allows you to communicate with your customers more effectively.[58]

Not only does the technology and business model seek to impose a new form of source control on the Internet, but it may impose a new form of pricing. The cable broadband architecture being put into place is being accompanied by a strategy to end "flat-rate pricing" to the Internet. As suggested by one major equipment vendor,

> NetFlow is a distributed software tool that allows for real time monitoring and accounting of data traveling through the HFC plant, including data that never travels beyond the local cable network. By collecting detailed statistics on the quantity and type of data being sent by each customer, cable operators can break through the flat rate pricing model and bill for the true value of services used. To transform NetFlow's powerful data gathering capabilities into a complete billing system, Cisco is partnering with leading billing software companies around the globe.[59]
>
> Cisco QoS services help you pursue a New World Internet business model for profitable revenue growth by:
>
> - Offering and charging for targeted, differentiated services
> - Maximizing network utilization
> - Maximizing revenue per carried bit
> - Generating incremental billing for new services[60]

---

[57] New Revenue, p. 9.

[58] Richter, M. J., "Everything's Coming Up Convergence," *Telephony*, June 28, 1999.

[59] "Cable for a New World: A Cable Provider's Guide to Digital Broadband Development," Cisco Systems, 1999.

[60] Controlling, p. 7.

The view that the "New World Internet Business Model" should change the way services are billed is shared by industry analysts.

> The critical success factors for the next generation service providers will be the ability to process network information. The ability to provide internal capabilities like, dynamic activation, real time accounting and collection, and sub millisecond response times of micro-transaction based services will be key. Service provisioning platform products, now in their collective infancy, must transcend the batch-oriented mentality of incumbent local exchange companies and rapidly migrate toward real-time operations. The potential exists to transcend the "pay as you go" state with true "pay per use" applications and services. One of the greatest opportunities of the emerging service provider space is to avoid repeating the limitations of the current generation of billing and accounting software. Paramount among these is the necessity to move to transactional processing as opposed to the traditional time and usage methods. Even those who have a vision of charging on a per-frame, or per-bit, basis must expand the array to assign multiple valuations per unit of data per transaction.[61]

The intersection of technology and the business model is evident in the area of pricing, as it was in discriminatory access for preferred providers.

> Enhanced services aren't worth doing unless there is a way to bill for them," says John Coons, an analyst at Dataquest.
>
> The economics of the New Network means that all-you-can-eat high-speed access for $40 per month is very unlikely. Flat-rate pricing simply cannot finance the infrastructure build out. Most users will end up paying for the network resources they actually use, and even extra to ensure high-priority, high-reliability communications, which creates a potential billing nightmare for the ISPs and telcos that provide and deliver broadband services…
>
> The New Net router needs to be more discriminating. To handle hundreds of high-speed lines effectively, it needs to know which type of data it is handling, its priority, and not least of all, how much someone is paying to have it delivered.
>
> It is already possible to do some specialized billing today, but only using a series of complicated workarounds. Cisco has created an IP billing initiative with Hewlett-Packard that aims to solve the problem more elegantly. The system is designed to let voice-over-IP and other broadband services be billed the way telcos prefer. [62]

[61] Hecht, Howard, "Big Fast Nets Not Enough," *Analysts Alley: TechWeb*, June 9, 1999.

[62] New Net, p. 186.

III. THE EARLY EVIDENCE OF DISCRIMINATION ON THE BROADBAND INTERNET

Thus, a combination of contractual (business) and technological restrictions can be used to regulate the flow of information and services in the "New World Internet Business Model." This is not a mere theoretical possibility. The exclusionary control of the network is already having an impact. Specifically, AT&T/@Home:

- restricts the speed of services that can be provided by non-affiliated entities;
- is regulating the streaming of video that consumers can download;
- is regulating the speed of information from consumers upstream.

A. STREAMING VIDEO

Ironically, one of the first restrictions AT&T/@Home placed on Internet activity is to limit the amount of time that streamed video could be downloaded by customers.

> To help keep the network running smoothly, the company previously placed a 10-minute limit on the TV-quality video customers can download off the Internet.[63]

AT&T's invokes the need to manage its network in response to the charges of discrimination and exclusion.

> For this reason, concerns that have been raised about legitimate restrictions imposed on the @Home and RoadRunner services to limit video streaming applications are entirely misplaced. Cable Internet service actually *expands* the number of Internet applications available to consumers. Ancillary restrictions on the use of these services, which help manage bandwidth utilization, are entirely reasonable.[64]

[63] Solomon, Deborah, "AtHome Speed Cap Angers Subscribers," *San Francisco Chronicle*, June 30, 1999.

[64] AT&T Public Interest Statement, pp. 84-85.

Cisco's marketing papers clearly suggest that the cable operators should gain control over the streaming video so that it does not undermine their control of the network, but the distinction between affiliated and unaffiliated streams is unmistakable.

> Cable operators need to design intelligent networks that can distinguish flows and treat them differently. They can design high-speed data networks that permit control of streaming-media content flow – the flow of incoming content from other networks (the Internet, for example) and flows within the network (to differentiate services). Committed access rate (CAR) is an example of the technologies that are used to control the flow of content in and out networks. Using CAR, a cable operator can define specific types of traffic and control how much bandwidth they consume…
>
> The cable industry is in a state of rapid transition from the old-world, closed-system that offers broadcast television to a new world driven by competition and choice. Good planning and network design will ensure that streaming-media is not a threat to cable operators, but a new platform for the easy deployment of highly customized and valued on-demand content and services.[65]

The irony of this restriction could not be more striking. While the cable industry itself is not competitive, broadband Internet video services could create competition with cable TV content. If cable TV companies to dominate access to broadband that possibility will be undermined.

When cable TV operators restrict the amount or duration of streaming video that consumers may receive over the broadband Internet they are restraining potential competition. Unlike the relatively poor-quality streaming video over in a narrowband connection, broadband-streaming video actually could potentially compete against cable TV – by streaming full video programming to consumers. The private regulation of broadband access imposes restrictions to ensure that broadband Internet services will not undermine the cable TV monopoly.

---

[65] *New Revenue Opportunities for Cable Operators From Streaming-Media Technology*, Cisco Systems, 1999 (hereafter Streaming Media), pp. 9, 12.

> They are also concerned that a truly open high-speed Internet system will threaten their core video-programming revenues; @Home is required under its contracts with cable operators to limit streaming video clips over its system to 10 minutes in length.[66]

The motivation for the restriction, while publicly pointing to congestion management, appears to have been privately centered on preventing competition.

> Last mile bandwidth constraints can still impede the speed of streamed video to cable households sharing links to cable system nodes. "It's a huge capacity hog," says Wolzien [video media analyst for Sanford Bernstein & Co.].
>
> That's part of the reason that the @Home high-speed cable Internet service generally restricts video downloads to 10 minutes.
>
> But the cable operators that own @Home established the 10-minute stricture on video streams to prohibit "backdoor" delivery of video signals from networks. "That's obviously designed so that a programmer can't circumvent our channels to put programming on @Home," says Gaurav Suri, director of business development for Comcast Online Communications.
>
> So @Home or third-party content providers can't stream long-form content, although Comcast is streaming Webcasts of concert events itself. Jeff Huber, @Home director of set-top products, calls the clause a "vestige" to insure against digital competition with HBO or ShowTime. "They really didn't understand what the evolution of this business was gong to be like or what this business was about.[67]

Scott Cleland, a prominent telecommunications industry analyst with Legg Mason has succinctly summarized the importance of the strategy to prevent the broadband Internet from posing a competitive threat to the cable monopoly video business. In his view, the leveraging market power is at least half the story.

> To date, most of the investment discussion of cable and the Internet has focused on how cable, "the best broadband pipe," can harness the Internet for extraordinary data services growth, and can leverage a ubiquitous residential proprietary facility for a powerful advantage in emerging e-commerce in content, services, and transactions. There has been much less focus on *the other half of*

[66] The Architecture, p. 5.

[67] Tedesco, Richard, "Who'll Control the Video Streams?", *Broadcasting and Cable*, March 8, 1999, pp. 22-24.

> *the investment story*. Few have extrapolated what the rapid proliferation of Internet-video alliances could mean for competition to cable.
>
> The Internet fundamentally undermines "middleman" roles by allowing consumers to bypass gatekeepers and deal directly with producers. Thus the Internet could enable consumers more control over what they watch, when they watch it, and what they pay for it.[68]

The strategy to prevent cable-based Broadband Internet from providing a vehicle for competition with cable's core business rests on exclusive deals and limitation on video streaming.

> The fulcrum assumption of whether the Internet proves friend or foe to cable is whether the cable plant is open or closed to competition. If closed, cable prevents Internet-led programming distribution competition on its scarce plant, and it enjoys uniquely unrestrained market power to leverage ownership of scarce facilities with e-commerce. Two methods cable is attempting to use to prevent competition from the Internet are drawing the most fire. (1) Cable's opposition to ISPs gaining equal access to the cable plant means that no Internet player can become a competing video programmer or packager on cable's extremely scarce facility. (2) Cable's contracts with @Home/Road Runner expressly prohibit the broadcast of no more than 10 minutes of streaming video which means that no Internet video programming that could directly compete with cable programming can use the cable pipe.[69]

The loss to consumers from this strategy to restrict competition should not be underestimated. Just last year the Department of Justice termed the cable TV industry one of the nation's "most durable and powerful monopolies." [70]

---

[68] Cleland, Scott C., "Is the Internet Cable's Friend or Foe Long-Term?", *The Precursor Group: Legg Mason Precursor Research*, April 19, 1999 (Hereafter, Friend or Foe).

[69] Friend or Foe.

[70] Wilke, John R., "Antitrust Suit Filed to block Primestar Purchase," *Wall Street Journal*, May 13, 1998.

B. RESTRICTION ON HIGH SPEED SERVICES

Access to unaffiliated high speed services already being restricted by the business policy of exclusion.

> Although vendors appear to have addressed most of the technical and cost concerns surrounding the digital set-top Web model, there's an unresolved issue that could affect the ability of operators to fully exploit the technology. As things now stand, contractual agreements with high-speed service providers, such as At Home, make it difficult to operate digital TV data access service at full rate, even though, technically, it can deliver data at 27 megabits per second to 38 Mbps to any given cluster of users on a shared-access basis.
>
> Bresnan will be "throttling down" the access speed to 128 kilobits per second per user rather than giving subscribers access to whatever the contention level allows…
>
> As is typical with such relationships, the contract that Bresnan Communications has with At Home requires that At Home be the exclusive provider of services accessed at rates faster than 128 Kbps. Without changes in At Home's fee structure, this would make delivery of its services to the set-top prohibitively expensive.[71]

@Home describes itself as "the leading provider of broadband Internet services over cable television infrastructure to consumers."[72] Its business model rests on exclusive arrangements with cable companies.

> By virtue of our relationship with 21 cable companies in North America and Europe, we have access to approximately 65 million homes, which includes exclusive access to over 50% of the households in the United States and Canada… We have entered into distribution agreements with 18 cable companies in North America whose cable systems pass approximately 58.5 million homes.[73]

Thus, the @Home restriction is already inhibiting commerce on the broadband Internet.

---

[71] Dawson, Fred, "Digital Set-Top Can Go Interactive Now," *Interactive Week*, June 7, 1999.

[72] At Home Corporation, For 10-Q, May 17, 1999 (hereafter @Home 10-Q).

[73] @Home 10-Q.

C. RESTRICTIONS ON UPSTREAM SPEED

AT&T/@Home has also restricted the ability of consumers to move data upstream. @Home service instituted (without notice to its customers) a change in its service that it referred to as the "ONAdvantage Upstream Enhancement."[74] This supposed "enhancement" restricts members of the public from uploading materials faster than 128kbps (previously, users were not restricted and some users reported upload speeds of approximately 1mbps – 8 times as fast as what @Home offers now). This appears to limit the ability of subscribers to set up web pages among other activities.

> AtHome said it is trying to protect subscribers against "certain customers" who are "abusing the network" by running servers out of their homes, thus hogging bandwidth. By operating a server, a customer could host Web sites, something AtHome subscriber policy forbids.[75]

While the claim is made that this restriction is necessary for network management, there is more than some who question its commercial motivation.

> AtHome's latest cap has rankled customers who say they enjoy the service but are upset with the company's decision to continually impose limits and hide it from subscribers…
>
> But some customers question the timing of the cap. AtHome has talked about rolling out a program called AtHome Professional, which would allow customers to pay extra for additional bandwidth so that they can transmit data at faster speeds.[76]

---

[74] A copy of the internal @Home memo detailing this service was posted to the comp.dcom.modems.cable newsgroup on June 8, 1999.

[75] Solomon, Deborah, "AtHome Speed Cap Angers Subscribers," *San Francisco Chronicle*, June 10, 1999 (hereafter, Speed Cap).

[76] Speed Cap.

Although there are certainly network management problems that must be handled by cable-based Internet systems, the line between network management and anticompetitive discrimination is faint indeed. The importance of quality of service and network management to operating an efficient network is apparent to all.[77] Access to interfaces and local caching are also widely recognized as essential to the delivery of high quality services.[78] The technology itself is not the culprit, but the more important the functions and the more powerful the technology, the greater the impact discrimination will have on market outcomes and the greater the temptation for abuse. Manipulation of Quality of Service (QoS) to gain an advantage for affiliated service providers is a definite possibility.[79] The fact that system vendors choose to highlight preferential

---

[77] Maxwell, Kim, *Residential Broadband*, John Wiley, New York, 1999, pp.84-85 (hereafter, Residential Broadband).

> It would be uneconomical to overbuild a network so that all users could have the best class of service all the time; this would amount to circuit switching, defeating the purpose of statistical networks to begin with. Therefore, networks of the future will offer various classes of service, depending upon applications, tariff structure, and willingness to pay. Each class will have to be defined by, or at least relate to, a differentiated set of Quality of Service (QoS) metrics which a network can monitor and manage.

[78] Residential Broadband, p. 25.

> First, transmitting a 6-Mbps video stream from Geneva to a single user in San Francisco will cost considerably more than transmitting it two miles within Kansas City itself, so much more that it will profit information providers to replicate services rather than pay transmission charges. Second, at broadband speeds the actual delay incurred by propagating information long distances, even at the speed of light, can severely reduce throughput under many data communications protocols. Indeed, it is network delay, caused largely by routers now, that has prompted recent interest in local caching of frequently visited web pages.

[79] Cisco, *Controlling Your Network – A Must for Cable Operators*, 1999, pp. 3, 5.

> Multiple service delivery over IP networks brings with it an inherent problem: How do these multiple services – packetized voice, streaming media, Web browsing, database access, and e-mail – coexist without competing with each other for bandwidth?
>
> Cisco QoS has solved the problem by putting absolute control, down to the packet, in your hands…
>
> The ability to prioritize and control traffic levels is a distinguishing factor and critical difference between New World networks employing Internet technologies and "the Internet."

treatment of affiliated services only states the obvious. These technologies are being developed by a number of different providers, including Cisco, 3Com, and Nortel, and have already been deployed in numerous locations by multiple cable providers.[80]

D. CONCLUSION

Together, cable's business model, the capabilities of technologies already being deployed, and the cable industry's extensive anticompetitive history make it clear that the cable

---

> But beyond that, new advanced QoS techniques give you the means to maximize revenue generated through bandwidth capacity providing highest quality for your most valuable services…
>
> Admission control and policing is the way you develop and enforce traffic policies. These controls allow you to limit the amount of traffic coming into the network with policy-based decisions on whether the network can support the requirements of an incoming application. Additionally, you are able to police or monitor each admitted application to ensure that it honors its allocated bandwidth reservation.
>
> Preferential queuing gives you the ability to specify packet types – Web, e-mail, voice, video – and create policies for the way they are prioritized and handled…
>
> Caching is the cost-effective and widely popular method of storing frequently accessed Web content regionally, near the users, to off-load the backbone of duplicated, same-page traffic. Whether it's Web page caching or the newer streaming-media caching, the idea is the same. Both are effective ways to optimize the bandwidth of the backbone by moving some of the content to the edge of the network in stored caching servers.
>
> As a leader in the caching market, Cisco created the Web Cache Communications Protocol (WCCP) to allow Cisco Cache Engines and other cache products to communicate with Cisco routers. WCCP, built into a wide variety of Cisco IOS-based networking products, enables the transparent, scalable, and secure introduction of caching technology into networks.
>
> Committed access rate (CAR) is an edge-focused QoS mechanism provided by selected Cisco IOS-based network devices. The controlled-access rate capabilities of CAR allow you to specify the user access speed of any given packet by allocating the bandwidth it receives, depending on its IP address, application, precedence, port of even Media Access Control (MAC) address.
>
> With CAR, the choice is yours, and it's easy to make constant revisions and adjustment as traffic patterns shift

[80] Cisco's equipment, in particular, has seen wide deployment. Until recently, Cisco was the only CMTS provider certified as DOCSIS compliant – giving their products (which include these QoS controls) immense market power vis-à-vis their competitors.

model at its most abusive is being extended to the Internet. Once again, consumers will be forced to pay for content they do not want because they have no alternative.

> It is important to be clear here. Cable operators aren't filtering URLs to prevent customers from reaching unaffiliated content sites. The problem is that they could… and users would have no alternative. The cable operators wouldn't even have to be so blunt, because their caching architecture allows some sites to receive better treatment than others. Also customers may not be able to use new services, such as home services, without @Home's blessing. Any ISP faces pressures to keep customers in its own orbit, but users can normally vote with their feet.[81]

Not only are consumers forced to pay, but if they try to use the broadband Internet in creative ways, AT&T/@Home can and does shut them off. The very essence of what has been so attractive about the Internet – the empowerment of consumers as users and speakers – is a nuisance to @Home and contradicts the business rules it wants to put on the broadband Internet.

> Customers have found a plethora of ways to abuse the network, Wolfrom [an At Home spokesman] says, including setting up File Transfer Protocol servers, mass e-mail businesses and gaming. In a few cases @Home subscribers have set themselves up as Internet service providers using the company's high-speed access pipes.
>
> "We've got people reselling our bandwidth to consumers as a dial-up service," Wolfrom says.
>
> While analysts agree that abuses are going on, they also say that downgrading the service may not be the best defense.
>
> "The providers are having second thoughts about their service because they don't like it that their customers have figured out new things to do with the bandwidth," says Gary Arlen, an independent industry analyst. "At Home does not want people to do this without getting a piece of the market. All the customers should not be penalized for the actions of a few."
>
> Arlen suggests At Home may be trying to push certain high usage customers to more expensive @Work service, a motive Wolfrom dismisses.[82]

[81] The Architecture, p. 5.

[82] Bannon, Karen J., "At Home Builds Local Access Speed Bumps," Inter@ctive *Week, May 24, 1999.*

The closed, proprietary version of cable-based broadband Internet service may be a “New World Internet Business Model,” as Cisco calls it, but it is simply not the Internet as we know it.

IV. TELEPHONE COMPANY EFFORTS TO CLOSE THEIR NETWORK FOR ADVANCED SERVICES

While AT&T fights to prevent open access requirements from being imposed on its broadband network, the telephone companies have been fighting just as hard to frustrate the open access requirements to which they are subject. At present, the telephone wires, when used for advanced services like Digital Subscriber Line (DSL), are treated as network elements under the Telecommunications Act of 1996. They should be subject to the full open access and unbundling requirements of the Act. The telephone companies have made it as difficult as they possibly can to use these network elements and successfully frustrated deployment of this technology.

A. DISCRIMINATION IN THE PROVISION OF ACCESS TO ADSL

As a general proposition, the local exchange companies (LECs) have resisted the market opening requirements of the Act.[83] The refusal to open markets has extended to the provision of advanced services with special force.

> Open access is not only threatened by cable companies. Telephone companies offering DSL connections are also trying to lock customers into their own information services, and hence their own partnerships with content providers, like AOL. Not a single independent ISP in Texas can offer DSL yet because Southwestern Bell makes the wholesale price for DSL higher than what they charge their own individual customers.[84]

[83] CFA has been one of the most vigorous critics of Regional Bell Operating Company failure to open local markets and their grossly inflated claims to consumer savings from premature entry into the long distance market (see Consumer Federation of America, *Stonewalling Local Competition: The Baby Sell Strategy to Subvert the Telecommunications Act of 1996* (January 1998), *Affidavit of Mark N. Cooper on Behalf of the Consumer Federation of America*, before the Public Utility Commission of California R.93-04003, I.93-04-002, R.95-04043, R.85-04044, June 1998; *The Consumer Stake in Vigorous Competition in the Illinois Local Telephone Market*, March 1999).

[84] ???.

The evidence presented to the FCC shows that the failure of LECs to open their markets extends directly to the case of advanced services (as summarized in Exhibit 2).[85] Several state Commissions have attested to the discriminatory practices of at least two LECs. Independent advanced service providers complain bitterly of discrimination and anticompetitive behavior.

Gaining a timing advantage in the offer of services appears to be the goal of some LECs in the provisioning of advanced services. The strategy involves multiple elements.

For example, the Minnesota Public Utility Commission points to a complaint in its jurisdiction where the incumbent prevented competitors from getting a head start, the incumbent refused to make the underlying wholesale service available to competitors, until it has fully developed its own retail offering even though the wholesale components are clearly available. In some cases, it appears that incumbents began accepting orders from its affiliate for wholesale service before the service was available to competitors. Even after the service is "generally" available, it appears that the incumbent delivers wholesale services to its affiliate more quickly than it is made available to competitors.

Competitors and regulators maintain that incumbents have been guilty of unfairly steering customers to affiliated ISPs at the expense of competitors. The affiliated ISP gets the preferential first spot in the list of options, and this gives it a huge advantage. There are even suggestions that incumbents may offer only one option.

[85] This section is taken from Consumer Federation of America and Consumers Union, "Reply Comments," before the Federal Communications Commission, *In the Matter of In The Matter Of Deployment Of Wireline Services Offering Advanced Telecommunications Capability, Etc.,* CC Docket Nos. 98-147, 98-11, 98-26, 98-32, 98-78, 98-91, CCB/CPD Docket N. 98-15, RM 9244, October 18, 1998.

Competitors and regulators have also identified severe problems in the use and abuse of information. There are two issues. First, affiliates of incumbents have access to detailed information about the readiness of facilities for specific customers and/or the usage characteristics of those customers. This gives them an advantage in targeting markets. Second, incumbents have access to information about customers who have chosen competitors. These customers are then targeted by the ISP affiliate for "win back" programs.

A concern has been expressed that incumbents could tie their advanced service offering to their other monopoly services to gain an advantage for their advanced service affiliate.

Regulators and competitors have expressed a concern that without specific guidance on interconnection and quality standards, the incumbents may have the ability to impair the quality of service of competitors, while favoring affiliates. Several examples are given including precluding competitors from cross connecting to one another, degradation of service, repositioning of service, etc.

There is no indication that these problem have abated since they came to light.

> Many ISPs believe that their way into the DSL market is being blocked by the Baby Bells and other incumbent Local Exchange Carriers (ILECs), which want to keep DSL business to themselves and favored partners. Some ISPs, for example, are outraged by America Online's recent deal with Bell Atlantic. That deal will enable AOL to offer its customers 640Kbps ADSL connections for an additional surcharge of $20 a month. Ordinary ISPs, on the other hand, will have to pay Bell Atlantic $39.95 per DSL circuit line.
>
> Pacific coast ISPs also are concerned about DSL. "Phone company DSL kills ISPs," asserts Dirk Harms-Merbitz, president of Power.net, a Los Angeles area ISP. "PacBel wants to sell DSL to ISPs at full retail prices with a $30, one time commission. [That] obviously makes no sense for an ISP."
>
> Other ISPs, which requested anonymity, paint an even gloomier picture. Some believe that their local ILECs are deliberately overloading their DSL connections

> by providing them with insufficient bandwidth from the phone company's central offices to the Internet.[86]
>
> Internet service providers (ISPs) in Colorado, Minnesota, Utah and Washington complain that U.S. West has been slow to roll out its MegaCentral wholesale Digital Subscriber Line (xDSL) service to them while favoring its own U.S. West.net affiliate through underhanded provisioning, planning and marketing tactics.[87]

One of the more troubling upshots of the discriminatory approach the local telephone companies have taken is that when they are not pushing their own ISPs, the enter into deals with the major ISPs that end up discriminating against small providers. By structuring volume discounts, smaller ISPs are placed at a substantial disadvantage. Although the rates are tariffed as required by law, the structure of the discounts is such that the largest suppliers have a substantial advantage.

B. THE TELCO PUSH TO AVOID OPEN ACCESS

In spite of this record, the LECs have sought to have advanced services excused from the open access requirements of the Act. They have claimed that they will not deploy services in many areas if they are subject to open access requirements. As previously noted, AT&T's vigorous defense of a closed cable network has increased the local telephone company pressures to exempt the fast lane of the telephone network from the open access requirements of the Act.[88] Having failed to provide nondiscriminatory access to these advanced services, the companies claim they should not have to, since cable companies do not.

---

[86] Vaughn-Nichols, Steven J., "DSL Spells Trouble for Many ISPs," *Smart Reseller*, February 24, 1999.

[87] Barrett, Randy, "Is U S West Monopolizing XDSL?," Inter@ctive *Week Onlline*, February 17, 1999.

[88] See, for example, "Testimony of Ivan Seidenberg," Before the *Committee on the Judiciary, United States Senate*, July 14, 1999.

As noted in the introduction, the telephone companies have launched a furious lobbying campaign of their own. A high profile lobbying group was formed.[89] An expensive television and print campaign was launched.[90] The propose of the campaign was to remove restriction on the Regional Bell Operating Companies that Congress had enacted to prevent them from leveraging their market power. The complaint was that the cable companies did not have to face such restrictions.

> McCurry pointed out that the restrictions on data traffic, combined with rules allowing cable companies to deny access to high-speed cable modems, is creating a cable monopoly for broadband Internet services.
>
> "There is a very real threat that consumers and providers alike will find themselves at the mercy of a cable-dominated broadband Internet that is very selective in deciding who will receive access. While local phone companies wait for the freedom to build networks, the cable companies will keep building their monopolies and consumers and businesses will suffer.[91]

In some respects, local phone company position is just as shameless as AT&T in seeking to gain a competitive advantage. Thus, one piece of legislation being supported by the industry would impose open access requirements on the cable companies and remove them from the telephone companies.[92]

Ironically, the FCC offered to relax the common carrier obligation on advanced service. It offered the Regional Bell Operating Companies a regulatory alternative that is roughly

---

[89] iAdvance is touted as a "coalition of public interest groups and telecommunications and technology companies that support affordable access to the broadband Internet for all Americans." The co-chairs are "former White House Press Secretary Mike McCurry and former U.S. Representative Susan Molinari (R-NY). http://idadvance.polcy.net/

[90] "iAdvance Launches New Broadband Access Ad Campaign," July 26, 1999.

[91] "McCurry Urges congress to Lift Data Restrictions, Promote High-speed Net Growth," August 30, 1999.

[92] Boucher, Goodlatte.

equivalent to the non-discrimination requirement imposed by the city of Portland. As Scott Cleland described it:

> Moreover, the FCC proposed in August to deregulate the Bell and GTE for data services, if the data service was provided through a separate affiliate and competitors has full and nondiscriminatory access to the unbundled local loop.[93]

The local phone companies complained bitterly about not be released entirely from regulation and not one company availed itself of the option. For the owners of the infrastructure, the goal is to maximize market power that can be leveraged through their facilities.

C. CONCLUSION: AN INEFFICIENT DUOPOLY BASED ON DISCRIMINATION

The LEC practices about which AT&T and the ISPs complain are exactly the same abuses that AT&T/@Home imposes on unaffiliated content providers. In the case of AT&T/@Home, the practices would be legal, if the services are defined as AT&T desires. In the case of the LECs, these practices are clearly illegal, but the LECs are seeking to have them redefined as legal, either by exception to the rule or by legislation.

In all cases, the practices are anticompetitive and will damage the free flow of services on the Internet (see Exhibit 3). In no case should they be allowed. The abusive treatment of unaffiliated ISPs that will occur in a market populated with closed systems will undermine the fundamental nature of the Internet. Two competitors are not enough to produce effective competition for content.

[93] Cleland, Scott, C., "Will the Cable Industry Have to Unbundle and Open its Network?," *The Precursor Group, Legg Mason Research Technology Team*, September 22, 1998.

Cleland has argued that the current regulatory structure will result in a duopoly that slows the deployment of technology and denies consumers choice and competition.

> *Schizophrenic Infrastructure Regulation = Duopolization:* The FCC's polar opposite regulatory approaches to telco and cable regulation largely foreclose Internet-led competition and force Internet players to align heir businesses with only one of the "last mile" duopolists – the telco. TPG believes the lack of access a technology-neutral or harmonized competitive Internet access and interconnection policy could preordain a duopoly broadband consumer market, which no economist would characterize as a competitive market…
>
> TPG believes either one or both of the FCC's approaches are incorrect…. (1) Current telecom broadband competition policy is to (i) demonpopolize by promoting competition on an open, shared network at wholesale prices: (ii) encourage access investment and innovation by competitors; and (iii) prevent the incumbent from anti-competitively cross-subsidizing or leveraging market power vertically. (2) In contrast, current tacit cable broadband policy is the opposite: (i) it fosters duopolization by allowing cable a closed proprietary network at retail prices; (ii) discourages competitive access investments and innovation by competitors; and (iii) allows the incumbent cross-subsidize and leverage market power vertically.[94]

[94] Cleland, Scott C., "Convergence Diverted – How Government Skews Broadband Investment," *The Precursor Group, Legg Mason Precursor Research*, March 30, 1999 (Hereafter Convergence Diverted).

V. DEPLOYING TWO OPEN NETWORKS

The public is faced with a simple choice. Policy makers can capitulate to the demands of the cable industry led by AT&T/cable and the local telephone companies by letting them deploy their systems as closed, proprietary networks and hope that competition overcomes the discrimination that is at the core of their business models. Or, policymakers can insist on open access for both delivery systems.

Clearly, two open pipes are better than two closed pipes. However, does the requirement that each be open mean that no pipes will be built as both AT&T and the LECs claim?

AT&T claims that there is now a competitive dynamic driving broadband deployment. The telephone companies have been stimulated to deploy DSL because AT&T has stepped up cable modem deployments. If the public insists on open access, AT&T says it will back off and the competitive dynamic will go away. AT&T will stop deploying and the RBOCs will stop, too.

- Will AT&T risk conceding the field to DSL and try to make its $100 billion investment in cable companies pay off on the basis of cable and telephone service alone? We doubt it.

The local telephone companies say they will not deploy if they are required to be open and they will certainly not be able to compete against a closed AT&T system. They, too, claim that if they have to allow open access, they will not make the necessary investments. They were saying that before AT&T entered the field with its cable purchases.

- Will the LECs sit on their hands while cable and other technologies market broadband services and allow their networks to become second rate? We doubt it.

We believe that market and technological dynamics will compel both to deploy the technologies in commercially profitable volumes, whether or not the networks are open. If there

are specific areas where economics will not get these technologies deployed, then targeted social policies to speed deployment to these areas are the only thing that will get them there.[95]

A. MARKET ANALYST'S VIEW OF OPEN ACCESS

Market analysts seem to recognize that the deployment makes sense whether or not there is an open access requirement. Policy makers should as well.

The view that open access would not only not prevent facilities from being deployed but might actually stimulate deployment is shared by a variety of analysts.

As a leading Internet based market analysis firm – the Motley Fool – concluded,

> If cable lines were essentially open, most of the technology industry would move quickly to build for cable access and the technology's user-base would very likely expand more quickly. Solutions to rising traffic issues, one of AT&T's arguments for keeping access limited, would be addressed and probably solved by the entire industry. As it is, more corporate momentum is going into DSL.
>
> I believe that a closed stance, on almost any issue, usually arises from a position of fear rather than one of confidence. If you have the best products, consumers will side with you no matter who the competitors are.[96]

A more traditional Wall Street analyst reached a similar conclusion. Rich Bilotti one of the authors of the Morgan Stanley Dean Witter report, *Digital Decade*, gave the following response when asked what the effect of open access would be to a session entitled "Financial Implication of Broadband Service" at the annual Cable TV association meeting.

> What happens to cable's financial broadband model if the government comes in and says Portland stands, you do have to unbundle… you have to have open broadband that works?

---

[95] See Advanced Services Reply and Digital Divide.

[96] Fischer, Jeff, "Excite@Home Alone: Open Minds or Locked, Plus Q2 Prognostications," *The Motley Fool*, July 16, 1999.

> I don't think it's devastating at all. In fact, I think under some business models open access is a good thing. Now, before everybody falls over from shock, let me say that I don't want the United States Government, worse yet, a Judge who clearly has no conception or understanding of either the Sherman Antitrust Act or the 1984 Cable Act, really dictating how that's suppose to occur. But the greatest thing that developed in basic cable in 1986 when it was deregulated was you had a wealth of programming developed by a wealth of different parties, many of whom were entrepreneurs… The same thing will happen with broadband and it's even more important because now it's not just a TV, it's the PC. And if there are multiple parties developing content and they're willing to pay a fair price for access, then that's fine. Actually, that's better for the cable operator. They're taking on a part of the marketing burden and customer service burden… Open access is not a bad thing when it's arm's length and negotiated. It's a horrible thing when it comes under a regulated rate of return price scheme. But the chances of that happening are so diminimus that we shouldn't even waste any time thinking about it.[97]

Merrill Lynch has reached a similar conclusion.

> The worst case scenario, i.e. that cable is forced to open its network to multiple ISPs, is probably not all that bad and *could* be positive. Cable operators would have to negotiate with ISPs and conceivably could negotiate better terms than current @Home/Road runner terms, under which cable companies only get a percentage of revenues… We believe it is possible for cable operators tap into multiple revenue streams including subscriber fees, advertising and e-commerce, the latter two of which cable currently does not participate in through @Home. **We believe cable operators do not want to be Internet content gatekeepers and over time we expect all large cable operators will negotiate deals with various ISPs**.[98]

It is obvious that the cable industry would prefer to run the cable-based broadband Internet as a proprietary, closed network. That does not mean they would not run it as an open network if they had to. These financial analysts clearly believe that it would be economically viable to deploy the network as an open network. In some respects they believe it would be better for the public and the companies.

---

[97] From the transcript of the session on "Financial Implication of Broadband Service," Annual National Cable Television Association, June ??, 1999.

[98] *Cable Television: Another Regulatory Muddle?*, Merrill Lynch, June 8, 1999.

B. THE REVENUE MODEL AND THE NEED TO DEPLOY ADVANCED SERVICES

The importance of advanced TV services and high sped data revenues to the financial success of AT&T's investment in cable makes it clear that it would be impossible to forego these streams of revenue. Exhibit 4 presents a breakdown of the revenues projected by Morgan Stanley Dean Witter per subscriber for 2008 for large MSOs. [99] It includes all revenue from the

---

EXHIBIT 4:
REVENUES FROM MULTI-SERVICE, INTERACTIVE DIGITAL CABLE NETWORKS: 2008

SERVICE	TAKE RATE (% OF HOMES PASSED)	MONTHLY REVENUE PER PER ACCOUNT	PER CABLE SUBSCRIBER
CABLE	60%	$41	$41
DITIGAL TV	29	19	11
HIGH SPEED DATA	24	35	14
TELEPHONE			
LOCAL	25	35	9
LONG DISTANCE	25	25	6

SOURCE: Morgan Stanley Dean Witter, *Digital Decade*, April 6, 1999, derived from Tables 2 and 51.

---

integrated multi-service cable network. Average revenue for basic cable is put at $41 per month. Digital TV adds about $11 per month. High speed data adds $18 per month. Local telephone service adds about $9 per month. The growth of high speed and digital TV on line revenue over the next ten years is larger than the growth in basic revenues. In other words, to the extent

that AT&T has paid a premium above the value of simple cable systems (and it has paid a substantial premium) it must generate these revenues or its stock value will be sharply diluted.

In addition to the total revenue motivation for AT&T to deploy these technologies, the Exhibit points to another important reason that neither the cable TV nor the telephone companies is likely to wait to deploy, hoping that no one else will. Another strong reason that open network requirements will not undermine commercial deployment of these technologies is that both the telephone and the cable industries have identified the same high value, high volume market segment as the key to entry into the multi-service broadband market. Whoever captures this segment of likely early adopters will gain an invaluable advantage. They simply cannot risk losing that advantage.

For example, U S West's Investor Handbook describes this business strategy precisely. In the introductory words of the CEO:

> A single voice connects with the world. That's how it starts. And that's how it started – our business that is. But today it's much more than a voice. It's a wireless or "uncorded" phone, a connection to the Internet, a fax, an e-mail, a conference call with a host of voices, a video image on a high-speed data, high-bandwidth line…
>
> Let me explain how I intend our consumer business to grow in the next few years.
>
> Today our average residential customer spends about $40 a month with us. That customer buys dial tone on one or two lines, along with some value-added features like *Caller ID* or *Voice Messaging*, and some short-haul long distance.
>
> Many of our premier customers are adding the data equivalent of dial tone – "Web tone" – which includes Internet access and high-speed data services. These same high-value customers are also using our PCS service. When we enter the interLATA long-distance business, we'll start to see another revenue stream from these customers. And eventually, we'll have a video offering to add to their monthly services.

[99] Digital Decade, derived from Tables 2 and 51.

We'll combine these services not just in a "bundle," but in a uniquely integrated, inter-related package.

And we estimate that will add up to $200 of potential monthly revenue from our highest-value customers.

Long distance companies assume the small bill customers are not attractive to their rivals, and therefore can be squeezed by rate increases. Competition is for large-volume business and residential long distance users, with the hope to add Internet access and integrate wireless users. This is oriented first toward business customers but increasingly toward the upper end of the residential market. [100]

AT&T's strategy was accompanied by the following analysis.

Surveys by Forrester Research have found that only 8 to 10 percent of all consumers are so taken with bundling that they're willing to switch providers to get it… Those customers, however, tend to be the ones who spend the most on communications services.

By playing to those with big bills, … AT&T is shifting its focus from amassing the most customers to earning the greatest profits. The company estimates that 30 million households spend at least $2,000 a year on communications, and that's whom it is trying to attract.[101]

Being first out of the box is critical. As the Morgan Stanley Dean Witter analyst put it

I keep two other points in mind, though -- remember micro-economics 101 – your getting the best customers. Well, they'll be gone by the time someone gets in number two. Don't forget the importance of first mover advantage in terms of brand name and all.[102]

The importance of early advantages is not only recognized by analysts of all types,[103] it is

stressed by the equipment manufacturers.[104]

---

[100] U S West Investor Handbook, pp. 1…3.

[101] Jon Healey, "AT&T's New Calling Package Bundles Various Services," San Jose Mercury News, January 28, 1999.

[102] Financial Implications.

[103] Lemos, Rob, "Who Will Rule the Broadband Era?" *ZDNet*, June 26, 1999.

> For many the first priority is access to the basic unit of consumption in America. "Whoever gets to the household first will win," said Kathie Hackler, an analyst with market researcher Dataquest.

In Exhibit 4, note that the high speed data customers that are attracted to the new digital service are assumed to spend almost as much on data as they do on cable TV and almost twice as much as they do on digital TV.

The other aspect of the deployment of these facilities is the ability to increase advertising revenues.

> Through the company's narrowband portal, Excite and broadband services, @Home and @Work, the company uniquely offers consumers content and interactive services cross both narrowband and broadband, and advertisers highly targeted marketing solutions across all platforms of delivery. Leveraging the high-speed, always-on attributes of cable, Excite@Home empowers unique multimedia applications that go beyond current Web experiences.

Expected changes in advertising revenues are even more dramatic than shifts in subscription revenue (see Exhibit 5). In the Morgan Stanley advertising revenues increase dramatically and shift sharply from broadcast to cable. Cable TV and DTV advertising revenue are projected to increase more than 500 percent. In ten years, the increase in cable/digital TV advertising revenues exceeds the total of subscription fees at the start of the period.

In a sense, a new advertising industry is born in these numbers. The only way in which such a dramatic increase in advertising can be accomplished is through a fundamental change in the nature of the activity. Advertising revenues are driven by the ability to sell and digital TV changes the business of selling through television. The huge transformation of advertising revenues is driven by two characteristics of the new advertising medium – the immediacy of the purchase and the targeting of the message.

---

[104] For example, Scientific Atlanta, The Interactive Digital Network; Cisco, New Revenue Opportunities.

One key factor in increasing the likelihood that advertisers will sell their products is the ability of the viewer to purchase instantaneously or to otherwise establish an immediate connection with the advertiser. Instead of having to dial a number or write a letter, the consumer is only one click away from the purchase. The connection can be made immediately from the device on which the advertisement is being viewed and without ever leaving the context of the advertisement.

> Internet links can offer excellent commercial opportunities. When the World Cup finals finishes imagine the potential of an onscreen advert selling the official ball of the tournament. It could be bought at the touch of a few buttons. Or the potential of going directly to the website of the official World Cup computer game.[105]

> In the second stage, from 2001 through 2006, we expect that digital television technology will rapidly alter the direct marketing sub-component of the television advertising market. In 1998, direct marketing (television commercials that include a telephone number or mailing address) is estimated to have been $18.5 billion of the entire television market. The digital cable television set-top boxes that are now beginning to be deployed will all have an ability to provide an interactive platform. To a lesser extent most satellite television set-tops can create a limited version of interactivity through a telephone modem connection. The ability to respond with a remote control rather than having to dial an 800 number is forecasted to drive the direct marketing industry to $30.8 billion by 2005.[106]

The second key characteristic that transforms advertising is the ability to use information about the consumer to target the advertising. Advertising can be imbedded and tailored not only to the specific type of program being watched, but it can be correlated with information about the viewer that has been gathered over the course of previous viewing sessions and interactions.

> In the world of direct mail, a response rate of just 1 percent can be quite profitable. Imagine an electronic "direct mail on steroids," where advertising is matched so precisely to the profiles of likely purchasers that response rates could

[105] Sims, Martin, "From Aiming Too High to Aiming Too Low," *Intermedia*, June 1999, p. 5

[106] Digital Decade, p. 3.

> routinely exceed 20 percent. That's the potential of advertising messages automatically directed to demographic groups of cable subscribers.
>
> Technically, more capabilities exist today; in fact, many digital interactive systems already deployed have enabling capabilities for targeted advertising. Because the potential is unproven, however, this application is the "wild card" of the group.[107]

Sitting out the opportunity to deploy the technology and compete for the advertising dollars simply does not seem like a viable option.

[107] Van Orden, Bob, "Top Five Interactive Digital-TV Applications," *Multichannel News*, June 21, 1999, p. 143.

PART II:
THE CONSUMER EXPERIENCE UNDER THE CLOSED CABLE TV MODEL

IV. THE CABLE TV MODEL

A. MARKET POWER WITH CLOSED ACCESS

A detailed look at the closed cable model and the market power on which it rests is crucial to understanding the implications of AT&T's acquisitions and its effort to ensure that cable-based broadband access is operated as a closed system. While a business model and the technology to implement it are necessary conditions for extending the closed network approach of cable to the broadband Internet, market power is the critical ingredient that AT&T has sought to add to the mix.

There is no doubt that AT&T is seeking to extend this model to the broadband Internet service. Its acquisitions have increased national concentration dramatically in both distribution and programming. Its system swaps have advanced regional clustering. Its acquisition of broadband Internet service suppliers will eliminate the most direct competition. However, the cornerstone of cable market power has always been the monopoly at that point of sale. This gives the operator the ability to raise prices and to gain leverage in other markets. That is what AT&T has fought to defend by insisting that its cable operations be run on a closed, proprietary basis.

Moreover, any legitimate consumer analysis of AT&T's efforts to convince federal and local regulators that its broadband Internet service should not be subject to open access requirements must start from a simple point about 15 years ago. In 1984 the rules that govern cable TV were changed to end rate regulation and to allow cable companies to operate their systems as closed, private networks. Common carriage or open access obligations, which apply to most transportation and communications networks in this country, were eliminated for

cable.[108] Although rate regulation came back for a short period in the mid-1990s, cable systems have been operated on a private carriage basis for a decade and a half. After the 1984 Cable Act, the industry set a course of increasing concentration and vertical integration of programming and distribution. Exhibit 6 presents an overview of the elements of that model as discussed in this Chapter.

> How have consumers fared in the 15 years since cable TV convinced Congress to end open access to cable systems and declare the industry to be governed by rules of private carriage?

For most consumers, the result is as evident as the monthly cable bill. Consumers routinely face high bills, poor service quality, and have no real alternative to their cable provider. When that cable TV reality is combined with the significant and increasing importance of the Internet to economic, social and political activity, it is easy to understand the intensity with which consumer, low income, and civil rights advocates are resisting AT&T's efforts to run the broadband Internet as a private lane on the information superhighway.

---

[108] Johnson, Leland, L. *Toward Competition in Cable Television* (MIT Press, Cambridge Mass, 1994), p. 58.

> The Communications Act of 1934 specifies that each carrier must (1) " furnish… communications service upon reasonable request" and (2) file a schedule "showing all charges for itself and its connecting carriers. Especially relevant for our purposes, the Act stipulates:
>
> It shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices classifications, regulations, facilities, or services for or in connection with like communications service, directly or indirectly by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality to any undue or on reasonable prejudice or disadvantage.

B. MONOPOLY AT THE POINT OF SALE

Head-to-head competition between cable companies is virtually non-existent. Out of 3000 plus cable systems, head-to-head competition exists in fewer than 200. Cable's dominance as the multichannel medium is overwhelming (see Exhibit 7), with a subscribership of approximately two-thirds of all TV households. Its penetration is over eight times as high as the next multichannel technology, satellite. Moreover, as will be demonstrated in the next chapter, cable and satellite occupy very different places in the market and cannot be considered to compete head-to-head.

This monopoly at the point of sale is reinforced by a strong trend toward regionalization in which one company gains ownership of many firms in a region. Clustering has increased sharply since 1994, up by almost 75 percent.[109] More than half of all subscribers was clustered at the end of 1997, and that figure will certainly rise dramatically as a result of the AT&T deals.[110] AT&T's wholly and partially owned systems are more high clustered than the remainder of the industry. Over two-thirds of its subscribers are in major clusters. Even higher percentages of the Cox subscribers are clustered, especially as a result of its deal with AT&T. In the remainder of the industry, the percentage is well below one-third. Thus, the dominant cable distribution systems dominate regions, which makes competitive entry more difficult.

[109] FCC, Fifth Annual Report, Table C-2.

[110] Paul Kagan Associates, *Major Cable TV System Clusters*, 1998.

A low price elasticity of demand and a moderate-income elasticity reinforce the market power on the supply-side of the point of sale. [111] This means first that consumer resistance to price increases is limited[112] and second that they are willing to pay more as their incomes rise. Cable's low elasticity of demand stems from the lack of alternatives and the popularity of television. Resistance to price increases is further blunted by industry policies to force new channels into basic and preferred packages. The companies never offer channels on an *a la carte* basis to determine if consumers demand exists. Instead, they bundle the new channels with popular programming and force consumers to purchase all or nothing. Consumers are forced to pay for the added, low value channels because they do not want to give up the whole bundle. Because there is no competition, there is no real alternative.

Low to moderate price elasticity and low to moderate income elasticity both feed off fundamental television viewing patterns that have been established over four decades.

---

[111] Mayo, J. W. and Y. Otsuka, "Demand, Pricing and Regulation, Evidence from the Cable TV Industry," Rand Journal of Economics, Autumn, 1991; Pacey, P. L., "cable Television in a Less Regulated Market," Journal of Industrial Economics, September, 1985; Webb, G.K., The Economics of Cable Television (Lexington: Lexington Books, 1983); Duncan, K. R. and C.F. DeKay, Estimation of an Urban Cable Demand Model and Its Implications for Regulation for Major Markets, Center for Metropolitan Planning and Research, Johns Hopkins University, March 1976; Charles River Associates, Analysis of the Demand for Cable Television, April 1973; Noll R.G., M.J. Peck, and M.J. McGowan, Economic Aspects of Television Regulation (Washington, D.C.: The Brookings Institution); R.E. Park, "Prospects for Cable in the 100 Largest Television Markets," Bell Journal of Economics and Management Science, Spring, 1972; Commanor, W.S. and B. M. Mitchell, "Cable Television and the Impact of Regulation," Bell Journal of Economics and Management Science, Spring, 1971, all find demand elasticities less than 1.5, even in large urban markets.

[112] As Landis and Posner put it (W. M. Landes and R. A. Posner, "Market Power in Anti-trust Cases," Harvard Law Review, 94: 1981, p. 50.)

> The higher the elasticity of demand for the firm's product at the firm's profit maximizing price, the closer that price will be to the competitive price, and the less, therefore, the monopoly overcharge will be... an infinite elasticity of demand means that the slightest increase in price will cause quantity demanded to fall to zero. In the opposite direction, the formula "comes apart" when the elasticity of demand is 1 or less. The intuitive reason is that a profit-maximizing firm would not sell in the inelastic region of its demand curve because it could increase its revenue by raising price and reducing quantity.

Americans watch a significant amount of television -- in the neighborhood of eight hours per day.[113] Television has come to be the premier source of information and entertainment in American life. Deeply entrenched viewing patterns and strong demand for entertainment, news, information, and sports make the market potential for cable huge. The ability to deliver large numbers of channels gives cable a huge advantage in meeting this demand.

C. OLIGOPOLY IN NATIONAL MARKETS

Since the passage of the Telecommunications Act of 1996, the prospects for head-to-head cable TV competition have been reduced by concentration at the national level. The march of concentration in the industry is striking. The issue in market structure analysis is to identify situations in which a small number of firms control a sufficiently large part of the market as to make coordinated or reinforcing activities feasible. Through various implicit and explicit mechanisms, when there are a small number of firms in control they can reinforce each other's behavior, rather than compete.

Identification of instances where a small number of firms can exercise this power is not a precise science. Generally, however, when the number of significant firms falls into the single digits, there is cause for concern, as the following suggests.

> Where is the line to be drawn between oligopoly and competition? At what number do we draw the line between few and many? In principle, competition applies when the number of competing firms is infinite; at the same time, the textbooks usually say that a market is competitive if the cross effects between firms are negligible. Up to six firms one has oligopoly, and with fifty firms or

[113] Consumer Reports in Competitive Issues in the Cable Television Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on the Judiciary, United States Congress, March 17, 1988, at 244; Digital Decade.

> more of roughly equal size one has competition; however, for sizes in between it may be difficult to say. The answer is not a matter of principle but rather an empirical matter.[114]

The clear danger of a market with a structure equivalent to only six equal sized firms is recognized by the Department of Justice in its Merger Guidelines.[115] These guidelines were defined in terms of the Herfindahl-Hirschman Index (HHI). This measure takes the market share of each firm, squares it, sums the result and multiplies by 10,000.

A market with six equal sized firms would have a HHI of 1667. The DOJ defined any market with an HHI above 1800 to be highly concentrated. Thus, the key threshold is at about the equivalent of six or fewer firms.

Another way that economists look at a market at this level of concentration is to consider the market share of the largest four firms (4-Firm concentration ratio). In a market with six equal sized firms, the 4-Firm concentration would be 67 percent. The reason that this is considered an oligopoly is that with a small a number of firms controlling that large a market share, their ability to avoid competing with each other is clear.

Shepherd describes this threshold as follows:[116]

> Tight Oligopoly: The leading four firms combined have 60-100 percent of the market; collusion among them is relatively easy.

While six is a clear danger sign, theoretical and empirical evidence indicates that one must have many more than six firms to be confident that competition will prevail -- perhaps as many as fifty. Reflecting this basic observation, the Department of Justice established a second

---

[114] J. W. Friedman, Oligopoly Theory (Cambridge: Cambridge University Press, 1983), pp. 8-9.

[115] U.S. Department of Justice, Merger Guideline, revised, 1992.

[116] Shepherd, William G., *The Economics of Industrial Organization* (Prentice Hall, Englewood Cliffs, N.J.: 1985), p. 4.

threshold to identify a moderately concentrated market. This market was defined by an HHI of 1000, which is equivalent to a market made up of 10 equal sized firms. In this market, the 4-Firm concentration ratio would be 40 percent.

Shepherd describes this threshold as follows:

> Loose Oligopoly: The leading four firms, combined, have 40 percent or less of the market; collusion among them to fix prices is virtually impossible.[117]

Even the moderately concentrated threshold of the Merger Guidelines barely begins to move down the danger zone of concentration from 6 to 50 equal sized firms. For a "commodity" with the importance of communications, certainly this moderately concentrated standard is a more appropriate place to focus in assessing the structure of the market. In other words, in simple economic markets, levels of concentration typified by fewer than the equivalent of 10 equal sized firms are high enough to raise questions about the competitive behaviors of the firms in the market. Given the nature of the telecommunications industry and the special concern about the free flow of ideas, this is a conservative level of concentration about which to be alarmed. As the number of firms that serve cable subscribers is reduced at the national level and as regional markets become more and more the exclusive province of individual firms, the chances that new entrants can challenge the incumbents and attack the monopoly at the point of sale is reduced.

Against that background cable concentration is alarming (see Exhibit 8). When cable was deregulated in 1984, the distribution segment was not concentrated at all (HHI about 350), with the equivalent of about 30 equal sized competitors. A decade later, concentration had

[117] Shepherd, p. 4.

advanced to the point where the distribution segment had the equivalent of about 9 equal sized competitors (HHI about 1100). If the AT&T-MediaOne merger goes through, the industry will be down to the equivalent of only about four equal sized competitors (HHI about 2500). As fewer and fewer firms exist in the industry, the chances that the dominant position in any given market will be challenged decline.

D. VERTICAL INTEGRATION

Concentration in distribution is also being leveraged into other markets. The same few firms that dominate cable TV distribution also dominate production of programming. About half of the regional and national programming is owned by companies that also own cable distribution systems, and the companies involved in the AT&T deals dominate both distribution and programming (see Exhibit 9).

When both distribution and programming are owned by the same companies, there is no incentive to bargain at arms length to drive down the price of programming. Because the industry is horizontally concentrated and vertically integrated, the dominant firms control enough of the market to exercise price leadership. The dominant firms in production do not have to fear competitive programming since their control over eyeballs enables them to frustrate entry. They can increase their overall profits by increasing programming prices, since they reap rewards from sales to both integrated and non-integrated distributors.

Competitors who are not affiliated with the dominant local/regional monopolist have little ability or incentive to compete on price. Independent cable operators can pass price increases for programming through to consumers due to inelastic demand and lack of

competition at the point of sale. The lack of competition in programming also means that there is nothing unaffiliated MSOs can do about it. Since they cannot find lower priced alternatives, they pay the increase to programmers and pass it through to consumers. Independent programmers do not compete on price because (1) they will not risk losing access to the eyeballs controlled by the integrated programmers and (2) they can live comfortably by following the leader. Everyone raises their own prices and lives comfortably under the umbrella established by the dominant firm.

The focal point of concern about vertical integration in the cable industry has been the link between cable programming and cable systems. As noted, the major MSOs involved in the AT&T deal are also the largest programmers. There is a long history of complaints about denial of access to subscribers by integrated MSOs and preferential access for affiliated programming. Evidence of these problems is both qualitative and quantitative.[118] The dominant, integrated firms get the best deals,

> One problem comes from most favored nation clauses that large operators often secure from programmers. Such clauses are supposed to guarantee an MSO of getting as good a price as any other operator, sometimes excluding Time Warner and TCI.[119]

Efforts to impose or obtain exclusive arrangements have become ever present controversies in the industry including efforts to prevent competing technologies from obtaining programming, as well as to prevent competition from developing within the cable industry.[120]

---

[118] Ahn, Hoekyun and Barry R. Litman, "Vertical Integration and Consumer Welfare in the Cable Industry," *Journal of Broadcasting and Electronic Media*, 41.

[119] McAdams, John M. Higgins, "Hangover from Takeovers," *Broadcasting & Cable*, April 19, 1999.

[120] HBO, a subsidiary of Time, played a key role in the effort to prevent TVRO operators from obtaining programming (see Chan-Olmsted, op. cit., at 11), and the effort to sell overbuild insurance (Competitive Issues in the Cable Television on Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on the Judiciary, United States Congress, March 17, 1988, at 127, 152-174). The current efforts to impose exclusive

Price discrimination against competitors and other strategies, such as placing programming of competitors at a disadvantageous position on the dial, have also been evident in recent years.[121]

Allegations of anti-competitive cable practices are not limited to industry critics. The practices within the industry became so bad that even major players became involved in formal protests. Viacom and its affiliates, a group not interconnected significantly with the top two groups in the industry, filed an antitrust lawsuit against the largest chain of affiliated competitors in its New York territory -- Time, HBO, ATC, and Manhattan cable. Ultimately, it sold its distribution business to its competitors.

The landscape of the cable industry is littered with examples of these anti-competitive behaviors. These include, for example:

- exclusive deals with independents that freeze out overbuilders,[122]
- refusals to deal for programming due to loopholes in the law requiring non-discriminatory access to programming,[123]
- tying arrangements,[124] and

---

arrangements have raised numerous complaints from potential competitors (see for example "Statement of William Reddersen on Behalf of Bell South Enterprises" (hereafter, Bell South), and "Testimony of Deborah L. Lenart on Behalf of Ameritech (hereafter, Ameritech)," Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, July 29, 1997.

[121] Competitive Issues in the Cable Television Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on the Judiciary, United States Congress, March 17, 1988. More recently, for example, The Time Warner, Turner merger as originally proposed included preferential treatment for TCI (see "Separate Statement of Chairman Pitofsky and Commissioners Steiger and Varney," In the Matter of Time Warner, File No. 961-0004). Efforts to exclude non-affiliated programs have also been in evidence, as Viacom's most popular programming (MTV) has been bumped.

[122] Bell South (p. 4) cites examples of suspected exclusive arrangements involving Eye on People, MSNBC, Viacom, and Fox, as does Ameritech (p. 7).

[123] The loophole will be terrestrial transmission to regional clusters, thereby avoiding the requirement to provide non-discriminatory access to satellite delivered programming. Bell South gives examples of Comcast in Philadelphia and Time Warner in Orlando (p. 5). Ameritech cites Cablevision in New York (p. 8).

[124] Bell South gives examples including NBC/CNBC, Scripps Howard/Home and Garden (p. 5).

- denial of access to facilities.[125]

E. IMPLICATIONS FOR CABLE-BASED BROADBAND

The highly concentrated market that results from AT&T acquisition of cable TV firms extends to the cable-based broadband Internet market where AT&T dominates the distribution network. Moreover, the only two widely available Broadband Internet programming services – @Home and RoadRunner – are joined in the AT&T MediaOne merger eliminating a hope for competition between the two. In its financial disclosure statements, @Home identifies Road Runner as the first source of competition for its service, the only one that is cable-based, and the only one that competes for both cable distribution arrangements and potentially end-user customers.

> Providers of cable-based Internet services: For example, Time Warner Inc. and Media One Group have deployed high-speed Internet access services over their local cable networks through their own cable-based Internet service, RoadRunner. We currently compete with Road Runner to establish distribution arrangements with cable system operators, but may compete for subscribers in the future if and when our cable partners cease to be subject to our exclusivity obligations.[126]

@Home describes itself as "the leading provider of broadband Internet services over cable television infrastructure to consumers."[127] Its business model rests on exclusive arrangements with cable companies.

> By virtue of our relationship with 21 cable companies in North America and Europe, we have access to approximately 65 million homes, which includes

[125]Testimony of Michael J. Mahoney on Behalf of C-TEC Corporation Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, July 29, 1997.

[126] @Home 10-Q.

[127] @Home 10-Q.

> exclusive access to over 50% of the households in the United States and Canada… We have entered into distribution agreements with 18 cable companies in North America whose cable systems pass approximately 58.5 million homes.[128]

Based upon the list of companies provided in the 10-Q report, we estimate that it has exclusive arrangements with companies that pass 53.4 million homes in the U.S. Not surprisingly, this includes the entire AT&T/TCI cable system. The additional cross-ownership with RoadRunner would have a dramatic effect on the market structure (as shown in Exhibit 10).

EXHIBIT 10
BROADBAND INTERNET MARKET CONCENTRATION

MARKET SHARE	CABLE-BASED BROADBAND		BROADBAND+ WIDEBAND	
	HOMES PASSED Millions	SUBS (%)	HOMES PASSED Million	SUBS (%)
@HOME 13 SYSTEMS	53.4	58	26.7	43
ROAD RUNNER		31	13.1	24
TIME WARNER	17.9			
MEDIA ONE	8.3			
HHI				
BEFORE	3754	4325	884	2425
AFTER	6724	7921	1584	4489

Subscribers all broadband = "The Battle for the Last Mile," The *Economist*, May 1, 1999.

---

[128] @Home 10-Q.

The cable-based broadband Internet market is currently highly concentrated, with an HHI based on the three firms of 3754. This assumes that Time Warner and MediaOne, the dominant joint venturers in Road Runner, claim exclusive rights to cable-based broadband Internet to their own subscribers. The merger would increase the market share by 3000 points. If the analysis were done on actual customers, it would reveal an even more dramatic impact on the cable-based broadband Internet market. These two companies account for virtually all such subscribers, with @Home accounting for almost 90 percent of the market. This is a merger between a number one and a number two in a highly concentrated market.

VII. THE PERFORMANCE OF THE CABLE CLOSED ACCESS MODEL

A. CABLE TV PRICES

The most direct manifestation of the consumer complaint against the monopoly, closed-access cable model is in the prices charged to consumers. Cable companies have used their market power to drive prices up faster than virtually every other consumer commodity in the past decade and a half (see Exhibit 11). During the periods when cable prices were not regulated, prices have increased at about three times the rate of inflation. For all the talk about changes in technology and more aggressive efforts to stimulate competition in the 1996 Telecommunications Act, the period since its passage looks about like the period after the passage of the 1984 Act, when rates were partially then fully deregulated. In fact, in real terms rates increased faster after the 1996 Act than at any time after deregulation in 1984.

Since the debate that is raging is, in part, a debate between local and federal regulators, it is instructive to compare how consumers have fared in telephone bills, which have been regulated at the state level and cable TV, where federal authorities pre-empted local regulation. This is what the FCC is proposing to do with respect to broadband access. That is, the FCC has filed in the Portland case, claiming that the city is preempted by federal statute from imposing an open access requirement.

In 1984 basic cable bill was about $9 per month, about 30 percent less than the average local telephone bill.[129] By 1998, the average basic monthly cable bill was over $27 per month,

[129] Cable bills are from Paul Kagan, *History of Cable TV Subscribers and Revenues*, 1998; Telephone bills are from Federal Communications Commission, *Primer on Rates*

more than twice the average basic monthly local telephone bill of $15.00 per month.[130]

Not only have prices been increased, but also the industry has restructured its revenue stream to maximize the leverage afforded by its market power. As noted above, it has engaged in bundling and price discrimination, driving consumers to buy bigger and bigger packages of programs at higher prices (see Exhibit 12). While basic packages were being expanded and bundled to force consumers to pay higher prices, rates for pay services were flat. With consumers forced to buy more and more programs, the industry has increased its advertising revenues even more sharply than its other sources of revenue (see Exhibit 13).

It is clear that pricing/packaging in this way is intended to force consumers to take the package. In economic terms it transforms consumer surplus into producer surplus. Although consumers would be less willing to pay for certain elements of the larger cable programming package, they must swallow the whole thing since their access to those elements they really want is tied to those they do not want. This is a prime illustration of the theory of the extraction of consumer surplus that can be found in the economic and marketing literatures. [131]

---

[130] This comparison does not include the subscriber line charge, which is a monthly charge imposed by federal regulators. It excludes all taxes.

[131] Joseph P. Guiltinan, "The Price Bundling of Services: A Normative Framework," Journal of Marketing, 51: April (1987), at 75.

> Consider, for example, a case in which we have two products or services and can estimate the distributions of reservation prices (the maximum amounts buyers are willing to pay) for each product. By bundling the products together, we essentially create a new product. If the two products are independent in demand, some customers who would only buy one of these if they were priced individually will now buy both products. The reason is that the value these customers place on one product is so much higher than its price that the combined value of the two products exceeds the bundled price. In economic terminology, the consumer surplus (the amount by which the individual's reservation price exceeds the actual price paid) from the highly valued product is transferred to the less valued product.

The key point here is that the ability to add programming to the basic package allows the cable operator to charge more for basic than its value. Even where over-the-air signal might be competitive, this bundling gives cable operators the opportunity to exercise market power. People pay for something they apparently could get for free because they are actually buying something else, access to the multiple channels.[132]

By pumping up basic rates and cramming programming into the basic tier, cable operators continually confronted subscribers with the ultimate choice: 'pay for the whole package or give up service.'

These anticonsumer pricing practices have already begun to spread to closed cable-based Internet services. As an example, MediaOne charges $78 per month to have all tiers of cable TV and Internet service.[133] If a consumer tries to lower the cable portion of the bill by about $20 by dropping a tier of cable TV service, MediaOne will raise Internet service price by rises by $10, without any improvement in the service.

---

[132] Pricing philosophy in the industry clearly exhibits an effort to capture consumer surplus. As an article in an industry journal pointed out just before deregulation (Celia Conrad, "Choosing Cable Programming Services," Cable TV and New Media, 4:9 (1986):

> If viewers can purchase one channel and watch a second channel for free, they never will pay the market value of the second channel. A more profitable alternative for the pay television operator would be to offer program type A on the first channel and program type B on the second, and then sell both channels as a package. At an appropriate price, consumers will purchase the package. Even if the costs of scrambling were minimal, the package selling strategy would be more profitable than selling each channel individually.
>
> The practice of bundling recognized that consumers have preferences not only for program types but also for program variety. For example, some consumers might pay $25 for service A only; $25 for service B only, but $37.50 for a bundle of both A and B. Bundling is like an insurance policy. Whatever occurs, the consumer can watch his or her preferred program. But package selling may be attractive even aside from its insurance policy attributes. With package selling, the profitability of carrying a program type depends not only on how much revenue it generates on its own, but also increases the total package's revenues.

[133] This example is a personal experience by the Chair of a CFA member groups in a MediaOne franchise area.

MediaOne offers to add telephone service to a big communications bundle for about $32, but the current local phone bill is only about $30. MediaOne hints that after the proposed merger with AT&T, bundling all services into one package, including long-distance, would provide additional discounts. But if the consumer does not want all the cable programming, he or she is not much better off. The tease of lower prices cannot be realized unless consumers bundle many services together with one provider, adding up a combined monthly communications bill of well over $100.

B. CABLE SYSTEM VALUES

For cable systems, the most frequently used measure of the extraction of value from consumers is the sale price of systems. When systems sell for a lot more than it would cost to build them, the assumption is that entry barriers are preventing competition from driving down the price.[134] Since systems can be built for a lot less than they are being sold, there must be something preventing entrants from coming into the field. The incumbent owners are clearly enjoying the benefits of the added value that barriers to entry are creating by selling at inflated prices.[135]

AT&T's push into the cable industry and its vigorous defense of the closed access model has driven the sales prices to unprecedented levels (see Exhibit 14). These numbers show that at

[134] Direct estimates of price cost margins are virtually non-existent. Robert Rubinovitz, Market Power and Price Increases for Basic Cable Service Since Deregulation, (Economic Analysis Regulatory Group, Department of Justice, August 6, 1991) finds that about half of the price increases since 1984 are due to the exercise of market power.

[135] Formally, the ratio is called Tobins Q and it is represented as the ratio of the sales price to the reproduction cost of the assets. This measure has been used for the past decade in the cable industry. In particular, it was used by telephone companies in arguing that they should be allowed to enter the cable TV business, see Shooshan and Jackson, Measuring Cable Market Power: Recent Developments, December 1988, S. J. Grossman, On the Misuse of Tobin's Q To Measure Monopoly Power, February 26, 1990.

the time of deregulation the premium paid for systems was about $400. This premium rose steadily until 1988, when systems were selling at $1500 more than their reproduction costs. During the regulated period of the 1990s, the premium declined. Price controls squeezed the monopoly profits. In 1994 the premium was about $1000 Deregulation and AT&T's efforts to monopolize the industry have driven the prices through the roof. Even including the cost of upgrading for interactive broadband service, the premium being paid appears to be two and a half times as great.

Exhibit 14 includes estimates of the purchase price of telephone subscribers. They do not reflect anywhere near the premiums that are being paid for cable TV subscribers. This is consistent with the consumer price comparisons offered earlier.

EXHIBIT 14
TRENDS IN TOBIN'S Q

YEAR	CABLE TV		LOCAL TELEPHONE	
	System Sale Price (a)	Reproduction Cost	System Sale Price(j)	Reproduction Cost (k)
1983	1026	645 (b)		
1986	1341	400-723 (c)		
1988	1998	490-603 (d)		
1992	1766	706 (e)		
1994	1869	700 (f) - 828 (g)		
1997	1899		1400-1450	700-900
1998	2900		1500-2000(l)	
1999	4100-4500(h)			800(m)
basic		700(i)		
interactive		2000(i)		

SOURCES:

a) Kagan Associates Inc., *Cable TV Master Database*, various issues.
b) H. L. Vogel, *Entertainment Industry Economics* (Cambridge University Press, Cambridge, 1986).
c) Shooshan and Jackson, *Opening the Broadband Gateway: The Need for Telephone Company Entry Into the Video Services Marketplace*, October 1987.
d) Shooshan and Jackson, *Measuring Cable Industry Market Power*, March 2, 1990., Leland L. Johnson and David P. Reed, *Residential Broadband Services By Telephone Companies*? (Santa Monica, Rand, 1990).
e)David P. Reed, *Residential Fibre Optic Networks* (Artech House, Boston, 1992), Tables 5.3 and B.8).
f) Johnson, Leland,
g) Bell Atlantic, *In the Matter of the Application of The Chesapeake and Potomac Telephone Company of Maryland and Virginia for Authority Pursuant to Section 214 of the Communications Act of 1934, as amended, to Construct, Operate, Own and Maintain Facilities and Equipment to Provide a Commercial Video Dialtone Service within a Geographic Territory Defined by the Maryland and Virginia Portions of the Washington Local Access Transport Area, December 1994 Exhibit 3. U.S. West, In the Matter of the Application of U.S. West, Inc., for Authority Pursuant to Section 214 of the Communications Act of 1934, as amended, to Construct, Operate, Own and Maintain Facilities and Equipment to Provide a Commercial Video Dialtone Service in Portions of Colorado Springs*.
(h) These are widely reported prices paid per subscriber in the wake of the AT&T-MediaOne deal.
(i) Morgan Stanley Dean Witter, *Digital Decade*, April 6, 1999.
(j) Purchase prices of SNET.
(k) Forward looking investment cost of as estimated by BCPM 3.0 and Hatfield 5.0a proxy cost models.
(l) Purchase of Ameritech, GTE, net of cellular and other business.
(m) Federal Communications Commission, Synthesis Proxy Cost Model.

VIII. PROMISES, PROMISES: THE REPEATED FAILURE OF CROSS-TECHNOLOGY COMPETITION UNDER THE COMMUNICATIONS ACT

A. THE CABLE ACTS OF 1984 AND 1992

In 1984, the Congress gave the FCC the authority to deregulate price in competitive cable TV markets. The FCC determined that three over-the-air channels were enough. In addition, it was expected that head-to-head competition between cable companies would grow and that competing technologies would add further competition.[136] As a result, cable systems serving about 80 percent of the country were deregulated. When competition failed to materialize, cable prices exploded and a public outcry ensued.

In an effort to stave off legislation to reregulate cable, the FCC reconsidered its three over-the-air rule and switched to six over-the-air stations as a standard. The pricing abuse was too great and the FCC's standard too weak to forestall legislation. Congress reregulated rates in 1992 and placed a range of "procompeititive" conditions on the industry.

---

[136] "Testimony of Thomas Wheeler, President of the National Cable Television Association, " before the *Subcommittee on Communications of the Committee on Commerce, Science and Transportation*, United States Senate, June 21, 1989, pp. 4-5.

> Any analysis of cable ownership issues must begin with the fact that cable systems have developed as local monopolies. The premise of the 1984 Act was that cable would develop in a competitive Many legislators may have relied upon the promise of the cable industry that:
>
> > "A consumer will have a couple of choices of cable companies. There will be two cable wires running down the street." (citing Testimony of Preston R. Padden, President Association of Independent Television Stations, Inc." before the *Subcommittee on Communications, Committee on Commerce Science and Transportation*, United States Senate, February 16-17, 1983, Senate pp. 126-127.
>
> Other legislators likely relied on the anticipation that cable would face competition from emerging technologies such as direct broadcast satellite.
>
> With the 20/20 vision of hindsight, it is now clear that there is no competition – no head to head cable competition, and no effective competition from other media.

During the second period of regulation, rate increases were diminished and the satellite TV industry came into existence. Contrary to threats from the industry about stagnation, that parallel the threats currently being made by AT&T, regulation did not slow the industry down (see Exhibit 15). Cable added about 7 million subscribers between the end of 1992 and 1995, from about 55 million to about 62 million. Its penetration rate grew at a slightly higher rate than at any time after deregulation in 1984.

During this period, satellite systems also grew, from about 1 million to 4 million. Apparently, the growth of satellite did not discipline the cable TV industry, since the moment the 1996 Telecommunications Act was passed, it returned to its historic pricing pattern, unrestrained by the of pressures of satellite competition. In real terms cable rate increases were larger with the presence of an expanding satellite sector than without it.

2. THE TELECOMMUNICATIONS ACT OF 1996

One of the great disappointments of the 1996 Telecom Act has been the failure of competition from alternative technologies to break down the market power of the incumbents. Congress had great hopes for this form of competition.[137] In fact, the only facilities-based competitor for local telephone service actually mentioned by the Act's Conference report was cable TV.[138] Similarly, Congress devoted a whole section to telephone competition for cable through open video systems.[139] Neither of these has proven effective competition. Open video

[137] This section is drawn from the Digital Divide.

[138] Pub. L. 104-104, Conference Report, p. 148.

[139] Title II, part 5.

systems are non-existent.[140] The only telephone company that has pursued entry into the cable business as a plain overbuilder – Ameritech – is in the process of being bought out by another telephone company – SBC – that tried the cable business and did not like it. SBC entered and exited the cable business before it acquired PacBell. It subsequently took PacBell out of the cable business, after it acquired the company. It cut back on Southern New England Telephone company's cable business.

With the failure of wireline competition to develop across industries, attention has focused on wireless competition. Unfortunately, wireless technologies (cellular/PCS[141] in telephone; DBS in cable) have not proven to be effective competitors.

---

[140] Fifth Annual Report, Appendix C.

[141] Although wireless telephony has achieved a substantial market penetration, it does not compete with wireline service for the overwhelming majority of consumers. PCS costs the average residential consumer several times as much as local exchange service costs and is attractive to, at most, a small percent of residential subscribers. PCS is much more expensive than basic local service and priced in a fundamentally different fashion.

- The basic monthly charge for PCS offerings is at least 50 percent higher than local exchange service.
- PCS service is measured service; local exchange service is generally flat rate.
- PCS service does not allow extension phones.
- PCS charges not only for outgoing calls, but also for incoming calls, which is never the case with wireline service.

For the average consumer, PCS is out of the question as a substitute for local exchange service. Even with the packages recently offered, the average monthly bill would be on the order of $200 for all calling. Consider AT&T's new service as an alternative to wireline. The average consumer would spend $30 per month for the service and $140 for use (1400 minutes of use at $.10). This does not include charges for incoming calls, extension phones, or a second line. The problem with cellular is that wireline local calling costs about $.016 per minute, one-sixth the rate for the AT&T package.

The solution, of course, is not to use the cellular for local calls. Rather, use it for long distance, outgoing calls, plus travel. Could such a dedicated long distance line replace one of the local wirelines? Local usage is not alleviated, nor is an Internet connection replaced. The wireline is not replaced. This is truly a cellular, long distance substitute. Thus, although cellular has achieved a high market penetration, it does not represent an economic substitute for wireline local telephone service. It is a different commodity that provides different functionality.

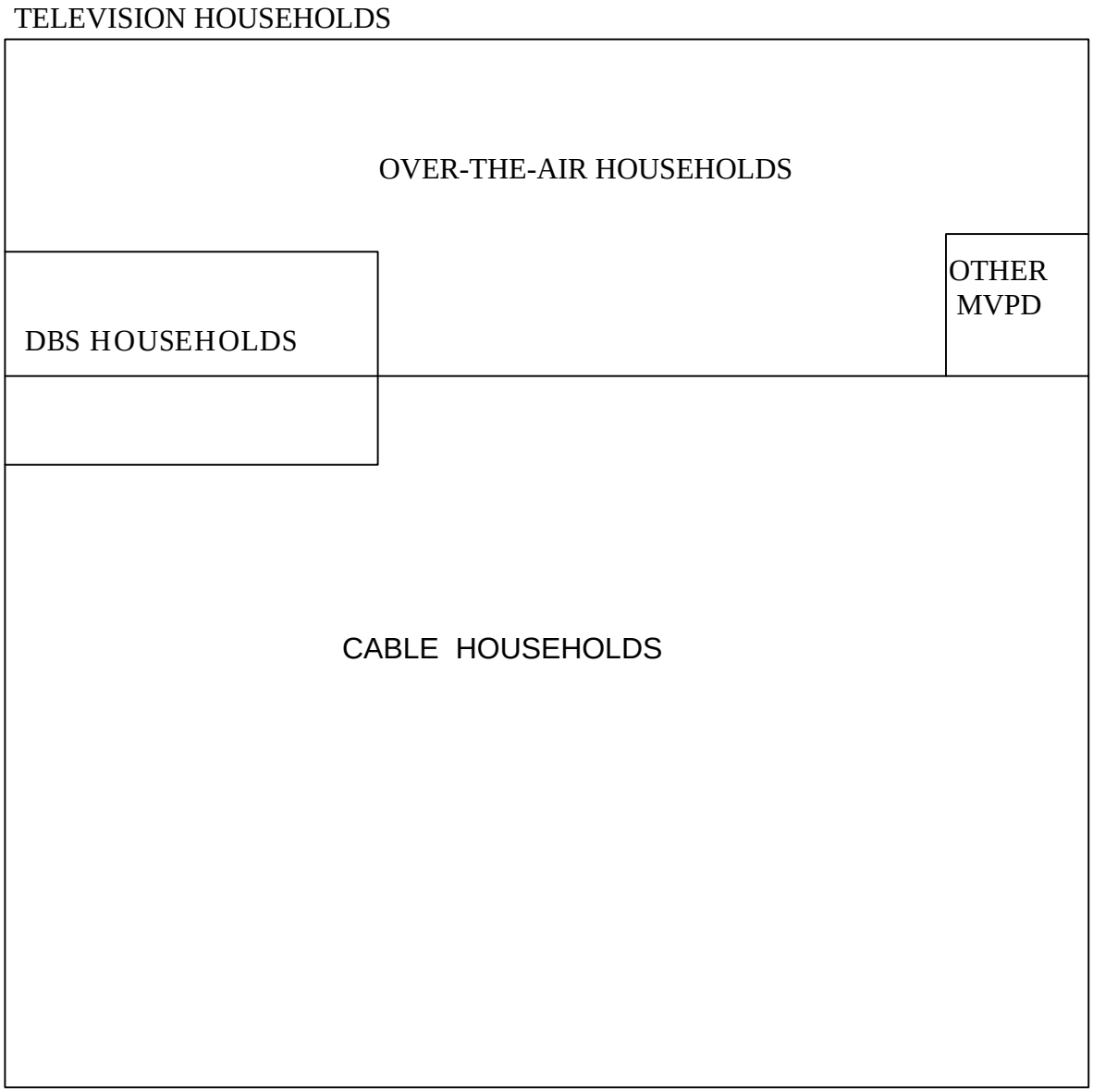
Exhibit 16 is drawn to scale to give a feel for the structure of the multichannel video programming distribution market (MVPD) as defined by the Department of Justice and the Federal Communications Commission. DBS has a very small market share of the MVPD market – about 9 percent. More importantly, because of its limitation in delivering local broadcasting, 40 percent of DBS subscribers also subscribe to cable. Thus, only 6 percent of MVPD households have DBS and not cable. DBS fills a niche at the high end of the market. Many subscribers buy cable in order to get a full complement of local programming. DBS's large channel capacity and high front-end costs dictate the packaging of large numbers of high priced channels and/or long term contracts. As a result, DBS is a small competitive fringe that is not capable of disciplining cable TV pricing. DBS still costs more than twice as much as cable does, not including the front-end system costs, which undermines its ability to compete on price.

Even in the midst of the debate over delivery of local stations by satellite, the largest satellite provider eschews price competition for the basic package.

> Congress has been moving at an unusual speed to pass a bill that would give DBS providers the right to beam local network signals to local subscribers…
>
> "It's not a cure-all," said Hartenstein, who has run DirectTV since its inception in 1990. For one thing, Hartenstein's business plan is not based on beaming local network signals to his customer base, soon expected to top 9 million. Instead, he is suggesting that subscribers buy new antennas to supplement their coverage. DirecTV is working with retailers to have the specialized antennas available at reduced prices. He calls this program "Distant/Terrestrial," meaning he sends you all the cable and movie channels you could dream of (for which he can charge), and you pick up the free network feeds with an extra antenna.
>
> Furthermore, Hartensteins' game plan does not include fighting for cable customers by undercutting cable prices. Analysts for the DBS and cable industries have figures out that the average American homeowner will cough up $30 per month for TV. Above that level, both camps believe, many consumers will bolt and run.

As discussed in the text, The same is true of wireless cable, with one exception. It has not achieved anywhere near the market penetration of cellular.

EXHIBIT 16
MARKET SHARE AND MARKET OVERLAP
IN THE MULTICHANNEL VIDEO PROGRAMMING DISTRIBUTION MARKET



SOURCE: Based on Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming,* CS Docket No. 98-102, December 23, 1998.

> Hartenstein seems determined to compete on quality and depth of service, not price.[142]

The DBS niche market is growing, but it did not slow the growth of cable. Cable subscribership increased more in 1997-1998 than it did in 1996-1997 and just about as much as it did in 1995-1996. The presence of DBS has done nothing to restrain cable price increases. They have been as rapid, in real terms, as at any time during the history of the industry. Cable makes much more money by increasing prices for basic cable than competing in the DBS niche (see Exhibit 17).

The vast majority of cable customers are victimized by cable pricing because the high-cost, high-capacity DBS offering exceeds their means or their needs. The revenue gained by increasing cable prices to existing subscribers since the Telecom Act of 1996 exceeds the revenue lost to all DBS-only subscribers by almost 3-to-1 and new DBS-only subscribers by almost 4-to-1. As shown in Exhibit 17, Cable revenues added from new subscribers at the higher prices, just about equaled cable revenues lost to all DBS-only subscribers and exceed cable revenues lost to new DBS-only subscribers.[143] Because DBS still costs twice as much as cable, DBS simply cannot constrain cable pricing abuses.

---

[142] Mundy, Alicia, "The Price of Freedom," *MediaWeek*, March 29, 1999., p. 32.

[143] The pricing strategy was apparent to some industry observers, as a Cisco publication noted (Abe, George, *Residential Broadband* (Cisco Press, Macmillan Technical Publishing, 1997), p. 217).

> Cable MSO management apparently agrees it is necessary to get more from each subscriber. Since the passage of the Telecom Act of 96, cable operators have taken the opportunity to raise subscription rates more than twice as fast as the consumer price index, clearly not a strategy for getting new households.

The addition of high priced broadband Internet services will do nothing to change this picture. In fact, it will likely make matters worse. By adding services at the high end, cable operators will be able to attack the high-end niche that satellite occupies. Satellite's high costs prevent it from attacking the cable base. If the AT&T strategy moves forward, we would expect even less market discipline to be placed on cable for its base market.

Consumer advocate Ralph Nader argues that AT&T's ability to "bundle" packages of telephone, Internet and television services could be used to cripple competition from wireless systems such as Hughes Electronics' DirecPC, which delivers high-speed data over DirecTV satellite TV equipment.[144]

[144] Boersma, Matthew, "The Battle for Better Bandwidth – Should Cable Networks be Open?," *ZDNet*, July 11, 1999.

IX. OPEN ACCESS IS THE RIGHT POLICY: IN THE SHORT AND LONG TERM

The previous chapter documents the failure of cross technology competition to break the cable monopoly. This history, combined with the head start that cable modems have achieved, and the proprietary model that AT&T is seeking to impose, bodes ill-for the prospects of future cross technology competition. However, even if more than one technology could successfully penetrate the market, allowing a small number of distribution networks to each chose a favorite service provider would not ensure effective commercial competition and raises major concerns about the ability of the network to support free expression. Two or three competitors are not enough to ensure competition. Two or three preferred service providers are not enough to ensure free speech.

One of the most troubling aspects of the current round of arguments over open access is that even if there were competition between two technologies, the closed access model would fundamentally alter the nature of the Internet. Because each technology insists that distribution and content must be linked, we would end up with a choice of a very few, private toll roads on which favored information service providers get the best treatment, not the wide open Internet, as we know it today.

The closed proprietary approach to communications networks is a radical departure from past policy

> In the past, companies that supplied the connection were rarely the same ones that supplied the information. Today, these roles are blurring. The major players are acting more like cable television companies. Cable companies control both the channels you can receive on the basis of popularity – and which channels they happen to have investments in. When you combine control of the pipeline with

> the information that flows over that connection, the result is leverage that can be applied to increase profits or even manipulate public opinion.[145]

We have noted that the important political and cultural role of the media should move policymakers to take a more cautious view of measures of market concentration, but the impact of the communications goes beyond that. As previously noted, the immense potential for the Internet to provide the opportunity for political and cultural expression, participation and education has been widely noted. This potential to enrich communications intersects with a fundamental concern in this country about the right to expression. By extending its business model to the broadband Internet, the cable industry would undermine the revolutionary potential of the Internet.[146]

A. ENSURING FREEDOM OF EXPRESSION

The Bill of Rights established the principle that the press plays a special role in politics. Diversity of political ideas available through the public media is believed to be a cornerstone of vibrant and free political debate. While the print media dominated the first century and a half of American political life, the enactment of the Communications Act of 1934 extended the commitment of public interest obligations to the broadcast media. In fact, the concerns about the important role of mass communications have only been redoubled as electronic media have come to dominate political discourse and cultural value formation.

Because policymakers recognize the uniquely important role that broadcast media - radio and later television – play in the marketplace of political ideas and in forming cultural values,

[145] Bandwidth, p.5.

[146] Control Revolution.

they have imposed more explicit standards on the industry. Above all, policymakers have rejected the notion that economics alone should decide the nature, availability, and content of political and cultural programming. Instead, policy has sought to prevent concentration of economic power from controlling the flow of ideas in the broadcast media by placing limits on the ownership of media outlets and imposing obligations to expand programming beyond what is simply profitable.[147] In short, what is good enough in the economic marketplace has not been considered to be good enough in the political and cultural marketplace.

Almost three-quarters of a century of public policy toward the mass media have been predicated on the recognition of the uniquely powerful impact of that media.[148] Broadband Internet services takes the role of the broadcast media to a higher level adding interactivity to immense reach,[149] real time immediacy,[150] and visual impact.[151] Because it is such a potent method of information dissemination, economic control over mass media can result in excessive

[147] The Federal Communications Commission, Further Notice of Proposed Rulemaking in the Matter of Review of the Commission's Regulations Governing Television Broadcasting, MM Docket No. 91-221, January 17, 1995, pp. 54-55; Hopkins, Wat W., "The Supreme Court Defines the Marketplace of Ideas," *Journalism and Mass Communications Quarterly*, Spring 1996.

[148] C. M. Firestone and J. M. Schement, Toward an Information Bill of Rights and Responsibilities (Aspen Institute, Washington, D.C., 1995), p. 45; Tempell, Guido H. III, and Thomas Hargrove, "Mass Media Audiences in a Changing Media Environment," *Journalism and Mass Communications Quarterly*, Autumn 1996; Gunther, Albert C. "The Persuasive Press Inference: Effects of Mass Media on Perceived Public Opinion," *Communications Research*, October 1998; American Civil Liberties Union v. Janet Reno, 929 F. Supp. 824 (E.D. Pa. 1996), 117 S.Ct. 2329 (1997).

[149] Bagdakian describes the economic and cultural impact of television as follows (p. 182.

[150]Gigi Sohn and Andrew Jay Schwartzman, "Broadcast Licensees and Localism: At Home in the 'Communications Revolution,'" Federal Communications Law Journal, December 1994; M. Griffin, "Looking at TV News: Strategies for Research," Communication, 1992.

[151] Kathryn Olson, "Exploiting the Tension between the New Media's "Objective" and Adversarial Roles: The Role Imbalance Attach and its Use of the Implied Audience, Communications Quarterly 42: 1, 1994 (pp. 40-41); A. G. Stavitsky, "The Changing Conception of Localism in U.S. Public Radio," Journal of Broadcasting and Electronic Media, 1994.

political power.[152] Media concentration has an impact on political activity and political outcomes because the economic interests of media owners influences their advertising and programming choices,[153] private interests inevitably attempt to dictate the access to political information.[154]

B. DIVERSITY

The concern about diversity rests on a series of straightforward, empirically observable relationships between economic interests and the political and cultural content of programming.[155] At its root, the argument is that the ownership is important in determining the nature of programming. This gives rise to a series of more specific and more policy relevant conclusions. The empirical evidence from the past two decades in which regulatory protections to ensure diversity have been relaxed argues strongly for a cautious approach to concentration of

---

[152] P. C. Washburn, "Top of the Hour Radio Newscasts and the Public Interest," Journal of Broadcasting and Electronic Media, 1995, pp. 74-75.

> Widespread belief in economic competition as the foundation for a genuine "marketplace of ideas" was exploited effectively by the Reagan administration and by powerful corporations such as AT&T, ITT, General Electric, CBS, Capital Cities, and IBM to eliminate much of the regulatory structure of America's communications industry.

[153] Bazelon, pp. 230-231.

[154] W. L. Bennet, News, The Politics of Illusion ((New York: Longmans, 1988); J. C. Busterna, "Television Ownership Effects on Programming and Idea Diversity: Baseline Data," Journal of Media Economics, 1988; E. S. Edwards and N. Chomsky, Manufacturing Consent (New York: Pantheon, 1988); J. Katz, "Memo to Local News Directors," Columbia Journalism Review, 1990; J. McManus, "Local News: Not a Pretty Picture," Columbia Journalism Review, 1990; J. McManus, "How Objective is Local Television News?", Mass Communications Review, 1991; Price, Monroe, E., "Public Broadcasting and the Crisis of Corporate Governance," *Cardozo Arts & Entertainment*, 17, 1999.

[155] D. H. Brown, "The Academy's Response to the Call for a Marketplace Approach to Broadcast Regulation," Critical Studies in Mass Communications, 1994; D. M. Hunsaker, "Duopoly Wars: Analysis and Case Studies of the FCC's Radio Contour Overlap Rules," Common Law Conspectus, 1994; Benkler, Yochai, "Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain," *New York University Law Review*, May 1999.

media ownership. Relying on economic forces alone will not produce diversified programming adequate to create the rich political and cultural arena demanded by political discourse because the dictates of mass audiences create a lowest common denominator ethic that undercuts that ability to deliver politically and culturally relevant diversity.[156] Technological answers do not alter the underlying economic relationships.[157] The mass market audience orientation of the business takes precedence.[158]

Empirical evidence clearly suggests that concentration in media markets has a negative effect on diversity.[159] Greater concentration results in less diversity, while diversity of

---

[156] Bagdikian, pp. 182... 188; P. Clarke and E. Fredin, "Newspapers, Television, and Political Reasoning," Public Opinion Quarterly, 1978; M. Pfau, "A Channel Approach to Television Influence," Journal of Broadcasting and Electronic Media, 1990; D. T. Cundy, "Political Commercials and Candidate Image," in New Perspectives in Political Advertising (L. L Kai, et. al, Eds.); G. J. O'Keefe, "Political Malaise and Reliance on the Media," Journalism Quarterly, 1980; S. Becker and H. C. Choi, "Media Use, Issue/Image Discrimination," Communications Research, 1987; J. P. Robinson and D. K. Davis, "Television News and the Informed Public: An Information Process Approach," Journal of Communication, 1990; Slattrey, Karen L. Ernest A. Hakanen and Mark Doremus, "TheExpression of Localism: Local TV news Coverage in the New Video Marketplace," *Journal of Broadcasting & electronic Media*, 40, 1996. Voakes, Paul S. Jack Kapfer, David Kurpius and David Shano-yeon Chern, "Diversity in the News: A Conceptual and Methodological Framework," *Journalism and Mass Communications Quarterly*, Autumn, 1996; Carroll, Raymond L. and C.A. Tuggle, "The World Outside: Local TV News Treatment of Imported News," *Journalism and Mass Communications Quarterly*, Spring 1997.

[157] Aufderheide, Cable, p. 55; D. Le Duc, Beyond Broadcasting ((New York: Longman, 1987); T. Streeter, "The Cable Fable Revisited; Discourse, Policy, and the Making of Cable Television," Critical Studies in Mass Communications, 1987; B. Winston, "Rejecting the Jehovah's Witness Gambit," Intermedia, 1990; N. M. Sine, et al., "Current Issues in Cable Television: A Re-balancing to Protect the Consumer," Cardozo Arts & Entertainment Law Journal, 1990; A. S. Dejong and B. J. Bates, "Channel Diversity in Cable Television," Journal of Broadcasting and Electronic Media, 1991; A. E. Grant, "The Promise Fulfilled? An Empirical Analysis of Program Diversity on Television," The Journal of Media Economics, 1994. R. H. Wicks and M. Kern, "Factors Influencing Decisions by Local Television News Directors to Develop New Reporting Strategies During the 1992 Political Campaign," Communications Research, 1995; Motta Massimo and Michele Polo, "Concentration and Public Policies in the Broadcasting Industry," Lubunski, Richard, "The First Amendment at the Crossroads: Free Expression and New Media Technology," *Communications Law and Policy*, Spring 1997.

[158] V. E. Ferrall, "The Impact of Television Deregulation," Journal of Communications, 1992, p. 26; K. C. Loudon, "Promise versus Performances of Cable," in W.H. Dutton, et al., Wired Cities: Shaping the Future of Communications (Boston, K.G. Hall, 1987).

[159] W. R. Davie and J.S. Lee, "Television News Technology: Do More Sources Mean Less Diversity," Journal of Broadcasting and Electronic Media, 1993, p. 455; H. J. Levin, "Program Duplication, Diversity, and Effective Viewer Choices: Some Empirical Findings," American Economic Review, 1971; S. Lacy, "A Model of Demand for News: Impact of Competition on Newspaper Content," Journalism Quarterly, 1989. T. J. Johnson and W. Wanta,

ownership across geographic, ethnic and gender lines is associated with diversity of programming.[160]

The narrow competition between a very small number of delivery mechanisms and their affiliate-favored programmers will dramatically reduce the number of ISPs, restrict content and limit consumer choice.

> Why should anyone care about this? There are several issues at stake. First is that the Internet doesn't have to work this way, and in fact shouldn't work this way. We already have about 6500 ISPs in the United States, which must be the definition of competition. They offer a wide variety of services, prices, levels of support, etc. But most of them could be wiped out in a few years if present trends continue.
>
> Second, if you have to buy an information service provider when you select what wire you want in your house, you're going to be looking at the user interface of a huge, monolithic, vertically integrated corporation. Your first encounter with the Internet is likely to look a lot like walking into a shopping mall – boring, redundant and absolutely writhing with advertising. It is true that you can buy e-mail from someone else, or change the home page in your browser, but most users don't know this.[161]

"Newspaper Circulation and Message Diversity in an Urban Market," Mass Communications Review, 1993; W. Wanta and T. J. Johnson, "Content Changes in the St. Louis Post-dispatch During Different Market Situations," Journal of Media Economics, 1994; D. C. Coulson, "Impact of Ownership on Newspaper Quality," Journalism Quarterly, 1994; D. C. Coulson and Anne Hansen, "The Louisville Courier-Journal's News Content After Purchase by Gannet," Journalism and Mass Communications Quarterly, 1995; Iosifides, Petros, "Diversity vesus Concentration in the Deregulated Mass Media," *Journalism and Mass Communications Quarterly,* Spring 1999.

[160] M. Fife, The Impact of Minority Ownership on Broadcast Program Content: A Case Study of WGPR-TV's Local News Content (Washington, D. C., National Association of Broadcasters), 1979); M. Fife, The Impact of Minority Ownership on Broadcast Program Content: A Multi-Market Study (Washington, D. C., National Association of Broadcasters), 1986); Congressional Research Service, Minority Broadcast Station Ownership and Broadcast Programming: Is There a Nexus? (Washington, D.C., Library of Congress), 1988; T. A. Hart, Jr., "The Case for Minority Broadcast Ownership," Gannet Center Journal, 1988; K. A. Wimmer, "Deregulation and the Future of Pluralism in the Mass Media: The Prospects for Positive Policy Reform," Mass Communications Review, 1988; T. G., Gauger, "The Constitutionality of the FCC's Use of Race and Sex in Granting Broadcast Licenses," Northwestern Law Review, 1989; H. Klieman, "Content Diversity and the FCC's Minority and Gender Licensing Policies," Journal of Broadcasting and Electronic Media, 1991; L. A. Collins-Jarvis, "Gender Representation in an Electronic City Hall: Female Adoption of Santa Monica's PEN System," Journal of Broadcasting and Electronic Media, 1993; Lacy, Stephen, Mary Alice Shaver, and Charles St. Cyr, "The Effects of Public Ownership and Newspaper Competition on the Financial Performance of Newspaper Corporation: A Replication and Extension," *Journalism and Mass Communications Quarterly,* Summer 1996.

[161] Chapman, Gary, "In Battle of the Internet Titan, Users are Likely to Be Losers," *Los Angeles Times,* February 1, 1999.

> Put it this way: being able to choose you broadband ISP is just as important as being able to choose the operating system for your computer. If you lose that choice, and your ISP is bundled with the cable modem, you lose control over what you can and can't do with the Net, just as having no choice of OS means losing control over what you can and can't do with the box.[162]

C. DENIAL OF CHOICE

The shift toward greater reliance on economic forces has not resulted in greater competition and has resulted in greater concentration in the many markets.[163] Greater concentration results in less competition.[164] There is evidence of the anticompetitive behaviors expected to be associated with reductions in competition, such as price increases and excess profits.[165]

---

[162] Weightman, Donald, "The Broadband Internet Wars," *Slashdot*, July 20, 1999.

[163] Bagdakian, pp. ix-x; J. G. Blumer and C. Spicer, "Prospects for Creativity in the New Television Marketplace: Evidence from Program Markets," Journal of Communications, 1990; H. Boyte and S. M. Evans, Free Spaces: The Source of Democratic Change in America (New York, Harper and Rowe, 1986); W. H. Melody, "The Information in I. T.: Where Lies the Public Interest?", Intermedia, 1990a; W. H. Melody, "Communication Policy in the Global Information Economy: Wither the Public Interest?, In M. Furgeson (Ed.), Public Communication: The New Imperatives, (London: Sage, 1990); R. M. Entenman, Democracy Without Citizens (New York: Oxford, 1989); D. A. Graber, Mass Media and American Politics (Washington, D.C., Congressional Quarterly Press, 1993). H. H. Howard, "TV Station Group and Cross-Media Ownership: A 1995 Update," Journalism and Mass Communications Quarterly, 1995.

[164] S. Lacy, "The Effects of Intracity Competition on Daily Newspaper Content," Journalism Quarterly, 1987; S. Lacy, et al., "Cost and Competition in the Adoption of Satellite News Gathering Technology," Journal of Media Economics, 1988; S. Lacy, et al., "Competition and the Allocation of Resources to Local News," Journal of Media Economic, 1989; S. Lacy, et al., 'The Relationship among Economic, Newsroom and Content Variables: A Path Analysis," Journal of Media Economics, 1989; D. L. Lasorsa, "Effects of Newspaper Competition on Public Opinion Diversity," Journalism Quarterly, 1991; S. Lacy and J. M. Bernstein, "The Impact of Market Size on the Assembly cost of Local Television News," Mass Communications Review, 1992; J. P. Vermeer, "Multiple Newspapers and Electoral Competition: A County-Level Analysis," Journalism and Mass Communications Quarterly, 1995, p. 104.

[165] M. O. Wirth, "The Effects of Market Structure on Television News Pricing," Journal of Broadcasting, 1984; J. Simon, W. J. Primeaux, and E. Rice, "The Price Effects of Monopoly Ownership in Newspapers," Antitrust Bulletin, 1986; W.B. Ray, "FCC: The Ups and Downs of Radio-TV Regulation" (Iowa: Iowa State University Press, 1990); R. Rubinovitz Market Power and Price Increases for Basic Cable Service Since Deregulation, (Economic Analysis

A small number of closed proprietary systems will undermine consumer sovereignty and set the stage for pricing abuse. The reward for successful anticompetitive activity will be the ability to impose pricing patterns on the public that take advantage of market power. The economic literature recognizes that the introduction of and reliance on price discrimination after the initial round of positive growth is a crucial factor. The price discrimination undermines the value of existing products by creating incompatibilities.[166] This extracts consumer surplus.[167]

Price discrimination allows firms to manage market processes so that introducing later versions of a product does not eliminate the ability to extract consumer surplus, as long as price discrimination occurs.[168] Bundling, which may play a critical role in creating the critical mass for positive externalities in the early period of adoption of a technology that provides the benefit of convenience for consumers throughout the product life cycle, also can play a role in exploiting customers.[169] When combined with market power, it results in overpricing of products in the aggregate.[170]

> "Cable operators offering cable modems price the service so that consumers are required to buy their standard cable TV product, which basically removes [satellite] as a viable competitor," Nader said, criticizing AT&T's purchase of TCI. Given AT&T's history [of] anti-competitive actions, and TCI's enormous

---

Regulatory Group, Department of Justice, August 6, 1991); B. J. Bates, "Station Trafficking in Radio: The Impact of Deregulation," Journal of Broadcasting and Electronic Media, 1993.

[166] Choi, pp. 171… 172…173.

[167] Choi, pp. 176…177.

[168] Moorthy, p. 303; Thum, pp. 280… 285, 286.

[169] Matutes and Regibeau, p. 46.

[170] Guiltnan, p. 74.

reputation for anti-competitive actions in the cable television market, it is prudent to expect bundling strategies to be used in anti-competitive ways against rivals.[171]

D. LOSS OF CREATIVITY

The shift toward greater reliance on economic forces has produced considerable evidence that the market will reduce public interest and culturally diverse programming.[172] News and public affairs programming is particularly vulnerable to these economic pressures.[173] As market forces grow, this programming is reduced.[174] The quality of the programming is also compromised.[175]

Proprietary, integrated content simply will not produce the creativity and the openness that have typified the Internet.

---

[171] Boersma, Matthew, "The Battle for Better Bandwidth – Should Cable Networks be Open?," *ZDNet*, July 11, 1999.

[172] V. A. Stone, "Deregulation Felt Mainly in Large-Market Radio and Independent TV," Communicator, April, 1987, p. 12; P. Aufderheide, "After the Fairness doctrine: Controversial Broadcast Programming and the Public Interest," Journal of communication (1990), pp. 50-51; M. L. McKean and V. A. Stone, "Why Stations Don't Do News," Communicator, 1991, pp. 23-24; V. A. Stone, "New Staffs Change Little in Radio, Take Cuts in Major Markets TV," RNDA, 1988; K. L. Slattery and E. A. Kakanen, "Sensationalism Versus Public Affairs Content of Local TV News: Pennsylvania Revisited," Journal of Broadcasting and Electronic Media, 1994; J. M. Bernstein and S. Lacy, "Contextual Coverage of Government by Local Television News," Journalism Quarterly, 1992; R. L. Carrol, "Market Size and TV News Values," Journalism Quarterly, 1989; D. K. Scott and R. H. Gopbetz, "Hard News/Soft News Content of the National Broadcast Networks: 1972-1987," Journalism Quarterly, 1992; Washburn, op. cit, p. 75; Ferrall, pp. 21... 28... 30.

[173] J. H. McManus, "What Kind of a Commodity is News?", Communications Research, 1992; Olson, op. cit..

[174] Bagdakian, pp. 220-221; D. L. Paletz and R. M. Entmen, Media, Power, Politics, (New York, Free Press, 1981). N. Postman, Amusing Ourselves to Death: Public Discourse in the Age of Show Business (New York Penguin Press, 1985); S. Lacy, "The Financial Commitment Approaches to News Media Competition," Journal of Media Economics, 1992.

[175] B. R. Litman, "The Television Networks, Competition and Program Diversity," Journal of Broadcasting, 1979; B. R. Litman and J. Bridges, "An Economic Analysis of Daily Newspaper Performance," Newspaper Research Journal, 1986; J. C. Buterna, "Television Station Ownership Effects on Programming and Idea Diversity: Baseline Data," Journal of Media Economics, 1988; J. Kwitny, "The High Cost of High Profits," Washington Journalism Review, 1990; A. Powers, "Competition, Conduct, and Ratings in Local Television News: Applying the Industrial Organization Model," Journal of Media Economics, 1993. Coulson, David C. and Stephen Lacy,

> The trouble with this vision is that it's not the Internet… and as a result it may not be as successful as the Internet. The vertically integrated model provides cable operators with better incentives to deploy facilities, but it leaves little room or incentives for third parties to develop innovative applications and services on that platform. The dynamism of the New – the Web browser, Amazon.com, Yahoo! and so on – came about because the infrastructure was an open platform not tuned for any one kind of applications. An always-on, high-speed Internet could enable many more unplanned innovations, but that will be less likely in the integrated world the cable operators are planning.[176]

E. LOSS OF UBIQUITY AND INTEROPERABILITY

The reliance on competing closed networks will result in a failure of ubiquitous universal service.

> First the competitive marketplace will serve the attractive markets first, connect them together first and give them interoperability first. The less attractive markets will be served last, if at all. The digital divide is inevitable under the competitive model. Second, interoperability will be inferior under the competitive model. Interoperability will be incomplete and determined by the private interests of the dominant firms. This new network will not spring to life at once. It will begin as local network islands, service dense or computer-rich neighborhoods, with islands connected by the Internet. Over time these islands may gradually connect together directly over fiber optic cables. However, they will never compose the sort of monolithic, single protocol network formed by today's public telephone system. The public broadband network may actually be several networks in one area, owned by competing companies, and joined by private networks and home networks by common lines, common protocols; and where common protocols do not exist, protocol converters. Something as well integrated and reliable as the worldwide telephone system is almost unthinkable in a competitive universe. [177]

Here we are focussed on the broad question of consumer-friendly deployment of the technology, not the issue of the digital divide. We do not believe that either a closed access or an

---

"Journlaists' Perceptions of How Newspaper and Broadcast News Competition Affects Newspaper Content," *Journalism and Mass Communications Quarterly*, Summer, 1996.

[176] The Architecture, p. 5.

[177] Residential, p.23.

open access regime will solve the problems of the access for disadvantaged groups.[178] However, there is a fundamental difference in the availability for the general population.

We have already noted that many analysts believe that open access will drive deployment because of the availability of programming and marketing efforts by ISPs. This is a practical version of the classic monopoly vs. competition argument. AT&T pushes a proprietary model because it can achieve higher margins by increasing price and restricting output.

> A proprietary cable network creates a protected "parallel Internet" that effectively reduces the addressable market of cable's e-commerce competition…
>
> An important caveat is that market growth could be so large that all e-commerce prospers. Nevertheless, ultimately cable's @Home/Excite business model constrains those of Yahoo/Broadcast.com. AOL and others.[179]

Not only does the closed access model restrict deployment of the leading technology, but Cleland argues that it prevents intermediate technologies that could fill market needs.

> And why is broadband service deployment so slow? Well, government policy only fosters convergence investment *within* industries (i.e. within regulatory regimes). It discourages *cross-industry* convergence investment by competitors. For example, the government inadvertently is discouraging the deployment of ISP-marketed, hybrid modems that could rollout broadband service faster and cheaper to the national mass market than either cable modes or DSL. Hybrid broadband modems use the best of both plants' *existing capabilities* – cable's high speed downstream path with the telco's reliable upstream path… but only if regulators allow competitors access to both duopoly last-mile facilities, not just the telco pipe. Schizophrenic broadband policy if unchanged, preordains a duopoly market where most American consumers will have to wait yeas unnecessarily while cable upgrades its one-way broadband plant for two-way and telcos upgrade their two-way narrow band plant for broadband.[180]

[178] Digital Divide.

[179] Regulatory Divergence.

[180] Convergence Diverted.

F. CONCLUSION

An open access policy would simply ensure that consumers would be able to choose from a variety of Internet Service and content providers as they currently can. Open access preserves competition within the Internet marketplace. If AT&T wins the "closed access" provision it is seeking, consumers will be faced with higher prices, lower quality of service, and fewer choices—just as they have with monopoly cable services today. In addition, a closed broadband policy would seriously undermine the financial prospects for many burgeoning high tech companies and entrepreneurs.

Despite AT&T's bluster, this issue is not about regulation of the Internet. The issue is about whether a private monopolist may regulate access to the broadband Internet to further its own private interests, or whether the local government entity that grants a franchise may promote the public interest by guaranteeing open access to the broadband Internet.

The closed, private network model of the cable industry poses the greatest threat to the liberating influence of the Internet. Combined with the highly concentrated and vertically integrated market structure that AT&T is seeking to impose on the industry through its mergers and related deals, prospect for consumers turn significantly negative as they are faced with the threat of abuse of AT&T's substantial market power.